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WEATHER BUREAU - - F. W. Reichelderfer, *Chief*

MONTHLY WEATHER REVIEW

SEPTEMBER 1947

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Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.

MONTHLY WEATHER REVIEW

Acting Editor, Robert N. Culnan

VOL. 75, No. 9
W. B. No. 1502

SEPTEMBER 1947

CLOSED NOVEMBER 5, 1947
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METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR SEPTEMBER 1947

AEROLOGICAL OBSERVATIONS

[For description of change in Table 1 and charts, see REVIEW, January 1946, p. 6]

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1947*

STATIONS AND MEAN SURFACE PRESSURES

Standard pressure surface (mb.)	Albany, N. Y. (1,010.2 mb.)				Albuquerque, N. Mex. (840.4 mb.)				Apalachicola, Fla. (1,016.2 mb.)				Atlanta, Ga. (984.2 mb.)				Auburn, Calif. (955.5 mb.)				Big Spring, Tex. (928.6 mb.)				Bismarck, N. Dak. (956.3 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	86	15.5	82	30	1,620	23.7	32	29	5	24.7	81	30	300	22.3	75	29	501	24.0	29	30	774	25.9	39	30	505	14.6	61
1,000	30	171	16.1	79	30	64	(*)	----	29	146	24.6	78	30	160	(*)	----	29	98	(*)	----	30	114	(*)	----	30	121	(*)	----
950	30	612	14.9	72	30	537	(*)	----	29	598	22.0	75	30	613	22.5	68	29	556	25.2	28	30	575	(*)	----	30	564	(*)	----
900	30	1,064	12.3	74	30	1,022	(*)	----	29	1,064	19.4	74	30	1,078	19.5	72	29	1,025	23.3	24	30	1,050	25.5	38	30	1,018	13.8	52
850	30	1,541	9.7	71	30	1,519	(*)	----	29	1,554	16.8	68	30	1,569	16.8	69	29	1,519	19.7	24	30	1,549	21.7	42	30	1,497	11.2	53
800	30	2,043	7.2	64	30	2,049	21.9	29	29	2,070	14.1	63	30	2,084	13.9	65	29	2,037	16.0	23	30	2,072	17.4	48	30	2,002	8.9	54
750	30	2,579	5.0	54	30	2,609	17.7	32	29	2,616	11.1	59	30	2,630	10.9	56	29	2,584	12.0	23	30	2,622	13.3	48	30	2,538	5.7	56
700	30	3,134	2.6	41	30	3,189	12.6	39	29	3,185	8.0	56	30	3,198	7.4	55	29	3,153	8.1	27	30	3,196	9.4	46	30	3,095	2.7	57
650	30	3,732	−.8	42	30	3,807	7.0	48	29	3,798	4.7	53	30	3,810	4.4	46	29	3,763	4.2	----	30	3,812	5.8	35	30	3,694	−.5	50
600	29	4,365	−4.1	----	30	4,457	1.6	52	29	4,442	1.2	49	29	4,453	.6	43	29	4,406	.2	----	30	4,458	2.1	----	30	4,327	−4.2	49
550	28	5,048	−7.9	----	30	5,151	−3.4	55	29	5,139	−2.7	46	29	5,148	−3.4	38	29	5,097	−4.1	----	30	5,153	−2.3	----	30	5,008	−8.5	47
500	28	5,779	−12.2	----	30	5,900	−8.4	47	29	5,886	−7.2	43	29	5,894	−7.9	----	29	5,842	−9.0	----	29	5,903	−7.0	----	30	5,740	−13.3	48
450	28	6,587	−17.2	----	30	6,718	−13.3	----	29	6,707	−12.3	44	29	6,715	−13.3	----	29	6,655	−14.9	----	28	6,725	−12.8	----	30	6,539	−18.6	43
400	28	7,451	−23.1	----	29	7,598	−19.2	----	29	7,591	−18.0	45	29	7,593	−19.3	----	29	7,529	−21.7	----	28	7,607	−19.2	----	30	7,403	−24.6	----
350	27	8,411	−30.1	----	29	8,577	−26.5	----	29	8,574	−25.2	----	29	8,571	−26.4	----	29	8,497	−29.3	----	27	8,588	−26.2	----	29	8,361	−31.5	----
300	25	9,498	−37.6	----	28	9,671	−35.1	----	29	9,675	−33.3	----	29	9,666	−34.5	----	29	9,579	−37.5	----	27	9,684	−34.4	----	29	9,434	−39.5	----
250	24	10,744	−46.4	----	28	10,917	−44.3	----	28	10,929	−43.0	----	29	10,914	−44.3	----	28	10,809	−46.8	----	26	10,939	−43.1	----	25	10,692	−47.2	----
200	22	12,208	−55.8	----	24	12,391	−53.8	----	29	12,395	−54.5	----	29	12,374	−55.0	----	27	12,254	−55.4	----	19	12,409	−53.0	----	8	12,216	−55.5	----
175	20	13,042	−59.2	----	9	13,224	−58.8	----	27	13,234	−60.6	----	27	13,214	−60.2	----	23	13,112	−58.7	----	13	13,259	−56.7	----	----	----	----	----
150	17	13,990	−61.3	----	----	----	----	----	23	14,189	−66.6	----	16	14,173	−65.1	----	14	14,066	−63.3	----	----	----	----	----	----	----	----	----
125	12	15,142	−63.7	----	----	----	----	----	10	15,274	−70.0	----	8	15,294	−69.7	----	9	15,181	−64.9	----	----	----	----	----	----	----	----	----
100	7	16,508	−64.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Boise, Idaho (916.2 mb.)				Brownsville, Tex. (1,013.8 mb.)				Buffalo, N. Y. (994.0 mb.)				Caribou, Maine (996.3 mb.)				Charleston, S. C. (1,016.4 mb.)				Ciudad Victoria, Mexico (975.4 mb.)				Columbia, Mo. (988.9 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	868	18.8	42	30	6	26.4	78	30	221	15.9	79	30	191	10.6	83	30	13	22.3	91	29	335	26.9	65	29	239	21.9	89
1,000	30	106	(*)	----	30	127	26.2	76	30	167	(*)	----	30	159	(*)	----	30	155	23.0	87	29	113	(*)	----	29	141	(*)	----
950	30	558	(*)	----	30	586	23.7	71	30	611	15.6	70	30	590	11.4	69	30	604	21.4	77	29	571	25.3	62	29	594	22.1	51
900	30	1,021	20.5	33	30	1,051	20.9	63	30	1,063	13.2	71	30	1,039	8.7	67	30	1,071	18.6	78	29	1,041	21.7	61	29	1,056	19.3	53
850	30	1,512	17.3	34	30	1,543	17.7	59	30	1,542	10.4	69	30	1,510	6.4	66	30	1,560	16.2	72	29	1,534	17.6	66	29	1,545	16.4	52
800	30	2,026	13.5	37	30	2,059	14.8	53	30	2,045	7.8	64	30	2,005	4.3	61	30	2,073	13.6	63	29	2,049	13.8	72	29	2,059	13.9	44
750	30	2,568	9.5	40	30	2,609	11.7	50	30	2,581	5.5	54	30	2,528	1.8	61	30	2,618	10.8	59	29	2,597	10.2	69	29	2,605	11.4	41
700	30	3,133	5.3	42	30	3,177	8.6	46	30	3,137	2.8	49	30	3,082	.6	55	30	3,188	7.9	52	29	3,163	7.1	68	29	3,174	8.3	41
650	30	3,736	1.1	44	30	3,792	5.2	42	30	3,736	−.4	49	30	3,671	−3.2	50	30	3,803	4.6	48	29	3,773	3.8	65	28	3,783	4.5	40
600	30	4,372	−3.0	43	30	4,435	1.7	41	29	4,371	−3.3	45	30	4,300	−6.9	54	29	4,445	.8	44	28	4,417	.5	53	28	4,429	.4	41
550	30	5,056	−6.8	43	30	5,133	−2.1	37	28	5,061	−7.2	----	30	4,972	−11.0	54	28	5,138	−3.1	37	28	5,113	−2.9	48	27	5,119	−4.0	----
500	29	5,793	−11.6	38	30	5,883	−6.6	36	28	5,797	−11.5	----	30	5,701	−15.2	44	28	5,887	−7.4	34	28	5,861	−7.1	43	27	5,864	−8.9	----
450	29	6,597	−17.3	40	29	6,709	−11.8	41	28	6,608	−16.7	----	30	6,494	−20.0	42	28	6,710	−12.5	----	28	6,688	−12.1	44	26	6,679	−14.4	----
400	29	7,465	−23.5	----	29	7,591	−17.8	44	27	7,466	−23.2	----	30	7,353	−25.8	----	28	7,591	−18.4	----	28	7,567	−18.1	47	25	7,554	−20.5	----
350	29	8,426	−31.0	----	28	8,575	−24.9	----	27	8,430	−30.3	----	30	8,307	−32.0	----	27	8,574	−25.1	----	28	8,550	−24.9	----	24	8,529	−28.1	----
300	29	9,500	−39.3	----	27	9,676	−33.0	----	25	9,512	−38.3	----	30	9,380	−39.2	----	27	9,675	−33.4	----	28	9,651	−33.5	----	24	9,616	−36.6	----
250	29	10,724	−48.1	----	27	10,933	−42.1	----	24	10,751	−47.2	----	30	10,607	−47.3	----	27	10,929	−42.9	----	28	10,906	−43.3	----	24	10,854	−46.3	----
200	25	12,167	−54.5	----	26	12,407	−52.8	----	22	12,218	−55.9	----	29	12,057	−54.1	----	27	12,394	−54.1	----	24	12,365	−55.0	----	17	12,307	−54.8	----
175	19	13,049	−57.5	----	29	13,268	−57.9	----	21	13,072	−59.5	----	26	12,926	−57.0	----	22	13,245	−60.2	----	18	13,208	−61.2	----	8	13,194	−59.0	----
150	14	14,010	−59.3	----	11	14,226	−63.5	----	20	14,036	−62.7	----	23	13,910	−59.7	----	14	14,202	−65.6	----	17	14,170	−67.7	----	----	----	----	----
125	----	----	----	----	----	----	----	----	14	15,183	−64.3	----	16	15,069	−60.9	----	6	15,297	−69.2	----	----	----	----	----	----	----	----	----
100	----	----	----	----	----	----	----	----	8	16,552	−64.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1947*—Continued

Standard pressure surface (mb.)	Dodge City, Kans. (925.7 mb.)				El Paso, Tex. (883.1 mb.)				Ely, Nev. (811.3 mb.)				Fort Worth, Tex. (991.3 mb.)				Glasgow, Mont. (940.6 mb.)				Grand Junction, Colo. (853.8 mb.)				Great Falls, Mont. (889.2 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	787	22.9	39	30	1,195	25.1	29	30	1,908	16.9	33	30	211	26.3	58	30	648	14.2	59	30	1,474	22.1	31	30	1,128	13.6	53
1,000	30	103	(*)	----	30	82	(*)	----	30	71	(*)	----	30	134	(*)	----	30	124	(*)	----	30	72	(*)	----	30	128	(*)	----
950	30	561	(*)	----	30	548	(*)	----	30	533	(*)	----	30	591	25.5	52	30	563	(*)	----	30	535	(*)	----	30	573	(*)	----
900	30	1,032	24.0	38	30	1,032	(*)	----	30	1,008	(*)	----	30	1,060	22.2	52	30	1,021	14.2	51	30	1,012	(*)	----	30	1,035	(*)	----
850	30	1,530	21.3	39	30	1,530	24.9	26	30	1,504	(*)	----	30	1,555	18.7	53	30	1,501	11.3	52	30	1,512	(*)	----	30	1,512	12.3	52
800	30	2,052	18.1	38	30	2,057	20.6	30	30	2,029	19.6	30	30	2,072	15.4	52	30	2,004	8.2	56	30	2,039	20.5	26	30	2,018	9.2	54
750	30	2,603	14.2	40	30	2,613	15.9	34	30	2,584	15.9	29	30	2,621	12.0	45	30	2,540	5.1	59	30	2,590	16.0	32	30	2,552	5.6	57
700	30	3,179	10.2	42	30	3,191	11.0	40	30	3,161	11.0	32	30	3,191	8.6	38	30	3,095	1.6	60	30	3,172	10.9	38	30	3,110	1.9	59
650	30	3,792	6.0	42	30	3,806	5.8	45	30	3,775	6.1	35	30	3,806	5.0	36	30	3,689	−1.9	59	30	3,782	5.5	47	30	3,707	−1.6	56
600	29	4,443	1.3	43	30	4,453	1.2	40	30	4,424	.9	41	30	4,450	.8	35	30	4,321	−5.9	62	30	4,432	.1	52	30	4,337	−5.5	53
550	29	5,142	−3.3	38	30	5,150	−3.0	----	30	5,116	−4.5	49	30	5,146	−3.3	----	30	4,999	−9.5	56	30	5,124	−5.2	53	30	5,014	−10.0	56
500	29	5,885	−8.1	----	30	5,895	−7.9	----	30	5,861	−9.3	43	30	5,892	−8.0	----	30	5,729	−14.1	52	30	5,866	−10.1	49	30	5,743	−14.6	54
450	29	6,700	−14.1	----	30	6,717	−13.3	----	29	6,682	−14.6	----	30	6,714	−13.9	----	30	6,527	−19.4	53	30	6,679	−15.4	----	29	6,544	−19.7	53
400	29	7,577	−20.9	----	30	7,593	−19.9	----	29	7,555	−21.1	----	30	7,588	−20.4	----	30	7,387	−25.6	----	29	7,555	−21.8	----	28	7,399	−26.1	----
350	29	8,548	−28.5	----	30	8,569	−27.4	----	29	8,526	−28.7	----	30	8,562	−28.0	----	29	8,337	−32.7	----	29	8,523	−29.2	----	28	8,351	−32.9	----
300	29	9,633	−36.7	----	30	9,659	−35.6	----	29	9,610	−37.2	----	30	9,649	−36.6	----	26	9,396	−40.5	----	27	9,606	−37.8	----	27	9,423	−40.9	----
250	27	10,873	−46.4	----	28	10,900	−45.2	----	27	10,848	−46.7	----	30	10,887	−46.0	----	25	10,608	−48.5	----	27	10,836	−47.3	----	27	10,638	−49.8	----
200	26	12,326	−56.1	----	26	12,350	−55.7	----	25	12,307	−55.6	----	30	12,339	−55.6	----	23	12,049	−54.0	----	16	12,257	−56.1	----	24	12,089	−56.3	----
175	22	13,176	−60.3	----	20	13,186	−60.6	----	23	13,153	−59.6	----	23	13,191	−60.0	----	21	12,902	−55.0	----	6	13,140	−57.7	----	22	12,937	−57.0	----
150	15	14,121	−63.4	----	12	14,133	−65.4	----	17	14,126	−63.2	----	13	14,159	−65.4	----	13	13,891	−55.8	----	----	----	----	----	20	13,905	−57.8	----
125	----	----	----	----	5	15,226	−68.3	----	11	15,234	−66.9	----	----	----	----	----	6	14,973	−55.6	----	----	----	----	----	8	15,078	−59.2	----
100	----	----	----	----	----	----	----	----	5	16,577	−66.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Greensboro, N. C. (988.9 mb.)				Hatteras, N. C. (1,018.6 mb.)				Havana, Cuba [1] (---- mb.)				Honolulu, T. H. (1,014.3 mb.)				Huntington, W. Va. (999.7 mb.)				International Falls, Minn. (974.9 mb.)				Joliet, Ill. (996.9 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	273	19.6	82	30	3	23.8	85	----	----	----	----	30	3	27.9	63	30	172	17.9	87	29	360	10.7	81	29	178	16.9	80
1,000	30	176	(*)	----	30	165	22.9	83	----	----	----	----	30	129	26.2	65	30	168	(*)	----	29	139	(*)	----	29	150	(*)	----
950	30	622	19.2	75	30	614	20.2	79	----	----	----	----	30	582	22.3	71	30	615	19.1	69	29	573	11.9	70	29	597	17.7	63
900	30	1,084	16.8	76	30	1,077	17.6	75	----	----	----	----	30	1,048	18.7	76	30	1,074	16.4	70	29	1,026	9.7	69	29	1,051	15.1	61
850	30	1,570	14.1	76	30	1,564	14.9	71	----	----	----	----	30	1,537	15.7	75	30	1,559	13.8	64	29	1,499	7.4	70	29	1,533	12.8	55
800	30	2,080	11.6	70	30	2,076	12.4	66	----	----	----	----	30	2,050	14.1	53	30	2,069	11.4	57	29	1,997	4.9	68	29	2,041	11.0	48
750	30	2,621	9.1	64	30	2,619	10.0	55	----	----	----	----	30	2,598	12.3	35	30	2,609	9.0	47	29	2,523	2.3	65	29	2,583	8.5	47
700	30	3,187	6.3	58	30	3,187	7.0	53	----	----	----	----	30	3,169	9.0	35	30	3,175	6.2	45	29	3,076	−.7	62	29	3,145	5.5	49
650	30	3,797	3.1	55	30	3,794	3.7	53	----	----	----	----	30	3,781	5.6	33	30	3,777	2.5	42	29	3,665	−3.8	60	29	3,751	2.1	47
600	30	4,437	−.6	50	29	4,441	.1	54	----	----	----	----	29	4,432	2.5	30	30	4,421	−1.1	----	29	4,293	−7.3	55	29	4,390	−1.6	47
550	30	5,129	−4.7	42	27	5,133	−3.6	48	----	----	----	----	29	5,132	−1.5	----	30	5,109	−5.1	----	29	4,963	−11.2	51	29	5,079	−5.6	44
500	30	5,872	−9.2	39	27	5,879	−8.1	48	----	----	----	----	29	5,883	−6.0	----	29	5,854	−9.7	----	28	5,686	−15.7	54	29	5,819	−10.0	----
450	30	6,688	−14.4	----	27	6,696	−13.2	----	----	----	----	----	29	6,709	−11.6	----	28	6,666	−15.5	----	28	6,476	−20.8	----	29	6,633	−15.5	----
400	30	7,563	−20.5	----	27	7,577	−19.1	----	----	----	----	----	28	7,593	−18.1	----	27	7,542	−22.1	----	28	7,334	−27.1	----	29	7,502	−21.7	----
350	30	8,537	−28.0	----	27	8,557	−26.0	----	----	----	----	----	27	8,574	−25.4	----	27	8,510	−29.5	----	26	8,274	−34.3	----	29	8,472	−28.7	----
300	30	9,624	−36.2	----	27	9,653	−34.2	----	----	----	----	----	26	9,676	−33.9	----	27	9,592	−37.7	----	24	9,332	−42.3	----	29	9,557	−36.8	----
250	29	10,864	−45.9	----	26	10,909	−43.8	----	----	----	----	----	25	10,926	−43.4	----	27	10,824	−47.2	----	22	10,547	−49.1	----	29	10,794	−45.9	----
200	25	12,302	−56.8	----	25	12,369	−55.0	----	----	----	----	----	24	12,396	−54.1	----	27	12,268	−56.6	----	14	11,978	−53.5	----	28	12,252	−54.3	----
175	25	13,137	−61.9	----	22	13,208	−60.0	----	----	----	----	----	19	13,247	−59.5	----	25	13,107	−60.9	----	9	12,875	−55.3	----	26	13,116	−57.7	----
150	18	14,069	−66.1	----	13	14,148	−64.3	----	----	----	----	----	6	14,179	−64.4	----	19	14,061	−64.0	----	----	----	----	----	18	14,054	−59.8	----
125	7	15,211	−69.1	----	----	----	----	----	----	----	----	----	----	----	----	----	11	15,165	−65.8	----	----	----	----	----	8	15,137	−60.0	----

Standard pressure surface (mb.)	Lake Charles, La. (1,015.1 mb.)				Lander, Wyo. (831.0 mb.)				Las Vegas, Nev. (944.2 mb.)				Little Rock, Ark. (1,007.0 mb.)				Mazatlan, Mexico (1,008.6 mb.)				Medford, Oreg. (968.6 mb.)				Merida, Mexico (1,010.1 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	29	5	24.2	80	30	1,696	16.6	40	30	574	31.1	17	30	79	23.3	69	30	14	28.9	76	30	401	22.3	41	30	27	26.1	84
1,000	29	137	25.4	71	30	80	(*)	----	30	53	(*)	----	30	140	24.3	63	30	91	28.1	77	30	122	(*)	----	30	116	25.5	84
950	29	590	22.7	66	30	539	(*)	----	30	518	(*)	----	30	598	23.7	55	30	549	24.4	75	30	575	22.9	38	30	571	23.3	80
900	29	1,057	20.0	63	30	1,010	(*)	----	30	1,003	30.5	16	30	1,060	20.4	57	30	1,019	22.2	69	30	1,037	19.3	40	30	1,039	20.5	79
850	29	1,548	17.0	61	30	1,501	(*)	----	30	1,509	26.0	19	30	1,552	17.4	55	30	1,515	19.5	64	30	1,525	15.3	45	30	1,532	17.6	75
800	29	2,063	14.0	59	30	2,020	16.8	36	30	2,037	21.1	23	30	2,067	14.5	55	30	2,035	16.5	61	30	2,035	11.4	48	30	2,049	14.6	73
750	29	2,610	11.0	54	30	2,570	12.7	38	30	2,592	16.1	28	30	2,616	11.6	50	30	2,587	13.2	61	30	2,574	8.0	46	30	2,595	11.6	71
700	29	3,178	8.1	44	30	3,140	8.4	40	30	3,171	11.0	34	30	3,184	8.3	48	30	3,160	9.2	66	30	3,136	4.3	42	30	3,168	8.6	66
650	29	3,790	4.8	36	30	3,750	3.6	47	30	3,784	5.6	39	30	3,799	4.8	43	30	3,773	5.1	68	30	3,738	1.1	37	30	3,781	5.2	63
600	29	4,435	1.2	30	30	4,392	−1.0	47	30	4,432	.9	41	29	4,441	1.2	38	30	4,422	1.2	70	30	4,374	−2.8	33	29	4,429	1.6	61
550	29	5,130	−3.2	----	30	5,082	−5.8	45	30	5,126	−3.8	36	28	5,138	−2.8	----	30	5,116	−3.1	67	30	5,058	−6.8	26	28	5,122	−2.6	60
500	29	5,878	−7.9	----	30	5,820	−10.9	43	30	5,872	−8.3	----	27	5,881	−7.6	----	30	5,868	−7.3	60	30	5,794	−11.8	----	28	5,876	−7.1	61
450	29	6,698	−13.5	----	30	6,628	−16.6	----	30	6,688	−14.2	----	27	6,705	−13.1	----	29	6,693	−12.0	58	30	6,599	−17.3	----	26	6,698	−12.0	61
400	29	7,575	−20.0	----	30	7,495	−23.2	----	30	7,564	−21.2	----	27	7,580	−19.8	----	28	7,575	−17.9	53	30	7,465	−23.4	----	26	7,583	−17.6	55
350	29	8,552	−27.3	----	30	8,457	−30.7	----	30	8,534	−29.0	----	27	8,556	−27.0	----	26	8,558	−25.1	----	30	8,427	−30.9	----	24	8,568	−24.9	----
300	29	9,643	−35.5	----	30	9,533	−38.9	----	30	9,616	−37.5	----	27	9,649	−35.1	----	26	9,661	−33.0	----	30	9,503	−38.9	----	24	9,670	−33.3	----
250	29	10,888	−44.5	----	30	10,757	−48.5	----	29	10,850	−46.9	----	24	10,904	−44.0	----	25	10,917	−42.7	----	30	10,730	−47.5	----	23	10,921	−43.5	----
200	28	12,354	−54.3	----	29	12,192	−56.0	----	29	12,297	−55.9	----	23	12,367	−53.6	----	24	12,385	−54.3	----	29	12,182	−55.2	----	12	12,394	−55.0	----
175	26	13,203	−60.1	----	27	13,041	−58.4	----	28	13,136	−60.0	----	16	13,217	−57.8	----	23	13,226	−60.8	----	29	13,028	−57.8	----	----	----	----	----
150	21	14,166	−66.0	----	22	14,007	−60.9	----	22	14,085	−64.3	----	7	14,210	−61.7	----	12	14,172	−66.6	----	23	13,977	−59.5	----	----	----	----	----
125	13	15,263	−69.8	----	9	15,082	−62.3	----	6	15,165	−66.4	----	----	----	----	----	5	15,266	−72.7	----	9	15,048	−60.2	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1947*—Continued

Standard pressure surface (mb.)	Miami, Fla. (1,014.7 mb.)				Nantucket, Mass. (1,019.6 mb.)				Nashville, Tenn. (997.4 mb.)				New Orleans, La. (1,015.9 mb.)				North Platte, Nebr. (918.3 mb.)				Oakland, Calif. (1,013.0 mb.)				Ogden, Utah (866.1 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	29	4	25.7	87	28	14	16.5	86	30	180	22.4	68	27	2	25.3	83	30	849	17.6	65	30	6	17.5	72	30	1,355	17.6	46
1,000	29	133	25.1	85	28	179	17.5	79	30	156	(*)	----	27	141	25.0	78	30	106	(*)	----	30	116	16.8	70	30	97	(*)	----
950	29	589	22.3	85	28	619	15.8	74	30	608	21.8	62	27	595	22.7	74	30	558	(*)	----	30	570	20.7	43	30	555	(*)	----
900	29	1,052	19.6	82	28	1,074	13.3	68	30	1,072	18.8	65	27	1,062	19.7	76	30	1,021	21.1	51	30	1,023	20.9	27	30	1,025	(*)	----
850	29	1,544	16.9	77	28	1,554	11.3	58	30	1,561	15.9	62	27	1,553	16.9	70	30	1,515	19.6	42	30	1,518	18.4	23	30	1,517	20.1	33
800	29	2,060	14.2	73	28	2,059	9.1	54	30	2,074	13.5	52	26	2,069	14.3	63	30	2,034	16.3	44	30	2,031	15.4	----	30	2,036	17.0	30
750	29	2,606	11.6	70	28	2,595	6.9	44	30	2,617	10.9	48	26	2,617	11.4	56	30	2,582	12.3	46	30	2,582	12.6	----	30	2,586	12.9	32
700	28	3,178	8.4	68	28	3,157	4.6	40	30	3,188	7.5	46	26	3,187	8.3	54	30	3,154	8.2	49	30	3,150	9.2	----	30	3,157	8.5	34
650	28	3,786	4.9	66	28	3,757	1.4	33	30	3,796	4.0	41	26	3,800	4.9	51	30	3,764	3.9	50	30	3,767	5.5	----	30	3,768	4.2	37
600	27	4,437	1.2	64	28	4,398	−1.7	----	30	4,441	.3	38	25	4,444	1.2	47	30	4,407	−.6	50	30	4,410	1.5	----	30	4,411	−.5	44
550	26	5,132	−2.6	62	28	5,079	−5.5	----	30	5,136	−3.7	----	25	5,140	−2.7	41	30	5,098	−5.3	51	30	5,109	−3.1	----	30	5,102	−5.6	47
500	26	5,884	−6.9	60	28	5,826	−10.0	----	30	5,880	−8.4	----	25	5,889	−7.3	38	29	5,841	−10.0	47	30	5,842	−8.2	----	30	5,841	−10.9	50
450	26	6,708	−11.7	61	28	6,631	−15.7	----	30	6,696	−13.8	----	25	6,712	−12.7	43	29	6,652	−15.8	46	30	6,672	−13.9	----	30	6,653	−16.1	----
400	25	7,593	−17.4	61	28	7,507	−21.9	----	29	7,573	−20.1	----	25	7,591	−19.0	----	29	7,523	−22.1	----	30	7,547	−20.7	----	30	7,520	−22.4	----
350	25	8,581	−24.0	----	26	8,480	−28.6	----	29	8,549	−27.5	----	24	8,569	−26.1	----	29	8,490	−29.6	----	30	8,520	−28.2	----	30	8,486	−30.1	----
300	23	9,688	−32.1	----	26	9,566	−36.3	----	29	9,640	−35.7	----	23	9,667	−34.0	----	27	9,583	−38.0	----	30	9,608	−36.5	----	30	9,564	−38.6	----
250	23	10,949	−42.1	----	25	10,802	−45.3	----	27	10,879	−44.8	----	20	10,918	−43.4	----	25	10,814	−47.6	----	28	10,851	−45.6	----	30	10,791	−47.7	----
200	23	12,420	−53.7	----	22	12,273	−54.9	----	26	12,340	−54.2	----	16	12,394	−54.0	----	24	12,250	−57.0	----	23	12,309	−54.1	----	29	12,238	−55.6	----
175	17	13,271	−60.1	----	19	13,142	−59.5	----	22	13,172	−58.9	----	12	13,238	−59.8	----	23	13,082	−60.6	----	18	13,178	−57.7	----	26	13,088	−58.7	----
150	9	14,252	−64.1	----	14	14,110	−62.7	----	18	14,126	−62.9	----	----	----	----	----	16	14,027	−62.2	----	9	14,156	−60.7	----	20	14,071	−62.6	----
125	----	----	----	----	6	15,220	−63.0	----	9	15,256	−64.7	----	----	----	----	----	9	15,152	−65.1	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	Oklahoma City, Okla. (970.2 mb.)				Omaha, Neb. (979.6 mb.)				Phoenix, Ariz. (970.3 mb.)				Pittsburgh, Pa. (976.0 mb.)				Portland, Maine (1,018.2 mb.)				Rapid City, S. Dak. (904.2 mb.)				St. Cloud, Minn. (978.1 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	391	24.3	57	29	308	21.0	64	30	339	31.0	36	30	382	18.0	75	30	20	13.6	85	30	980	15.4	50	30	317	15.1	75
1,000	30	123	(*)	----	29	127	(*)	----	30	66	(*)	----	30	170	(*)	----	30	172	15.7	78	30	109	(*)	----	30	126	(*)	----
950	30	577	25.4	49	29	577	21.2	54	30	533	33.8	26	30	621	17.6	70	30	611	14.3	68	30	556	(*)	----	30	570	15.8	64
900	30	1,050	23.0	48	29	1,040	18.9	51	30	1,016	30.0	27	30	1,074	15.4	68	30	1,063	11.9	66	30	1,019	(*)	----	30	1,022	13.8	62
850	30	1,545	19.7	50	29	1,529	16.6	52	30	1,522	25.7	30	30	1,557	12.6	69	30	1,540	9.3	63	30	1,506	15.7	45	30	1,502	11.5	59
800	30	2,064	16.2	49	29	2,043	14.0	50	30	2,051	21.1	34	30	2,064	10.1	62	30	2,041	7.2	53	30	2,018	12.5	50	30	2,007	9.0	54
750	30	2,614	12.6	48	29	2,588	10.9	47	30	2,611	16.4	39	30	2,606	7.8	53	30	2,574	4.9	49	30	2,562	9.7	53	30	2,545	6.2	49
700	30	3,186	9.2	43	29	3,157	7.2	46	30	3,186	11.5	41	30	3,166	5.0	45	30	3,130	2.1	46	30	3,126	6.0	54	30	3,102	3.3	47
650	30	3,799	5.7	39	29	3,766	3.0	39	30	3,805	6.4	46	30	3,772	1.8	45	30	3,724	−1.0	40	30	3,732	2.1	54	30	3,704	−.2	44
600	28	4,448	1.5	----	29	4,405	−1.1	40	30	4,451	1.9	45	30	4,408	−1.4	38	30	4,360	−3.9	----	30	4,371	−2.2	55	30	4,336	−3.9	47
550	28	5,141	−2.7	----	29	5,094	−5.5	44	30	5,152	−2.7	40	30	5,099	−5.4	----	30	5,042	−7.9	----	29	5,057	−6.5	52	29	5,015	−8.3	49
500	28	5,892	−7.7	----	29	5,836	−10.1	42	30	5,896	−7.4	----	30	5,839	−9.8	----	29	5,776	−12.2	----	29	5,796	−11.5	52	29	5,749	−12.9	48
450	27	6,712	−13.4	----	29	6,645	−15.6	40	30	6,722	−13.0	----	30	6,651	−15.2	----	29	6,582	−17.4	----	29	6,598	−17.2	49	29	6,554	−18.1	47
400	27	7,592	−20.1	----	29	7,519	−22.3	----	30	7,597	−19.7	----	30	7,523	−21.7	----	29	7,447	−23.2	----	29	7,469	−23.5	----	29	7,416	−24.1	----
350	27	8,566	−27.7	----	29	8,486	−29.6	----	30	8,573	−27.2	----	30	8,492	−28.6	----	28	8,411	−30.5	----	29	8,432	−30.5	----	29	8,375	−31.0	----
300	27	9,656	−35.9	----	29	9,567	−38.2	----	30	9,665	−35.8	----	30	9,578	−36.7	----	28	9,488	−38.5	----	29	9,511	−38.4	----	29	9,451	−38.7	----
250	25	10,900	−45.1	----	29	10,798	−47.5	----	30	10,907	−45.1	----	29	10,823	−46.0	----	28	10,717	−47.4	----	28	10,754	−47.3	----	29	10,680	−47.1	----
200	22	12,364	−54.6	----	28	12,240	−56.5	----	30	12,366	−54.6	----	29	12,276	−55.3	----	25	12,173	−56.3	----	22	12,212	−55.6	----	26	12,141	−54.0	----
175	14	13,198	−58.1	----	23	13,089	−59.2	----	24	13,221	−59.3	----	26	13,127	−59.1	----	25	13,014	−59.3	----	9	13,008	−58.7	----	22	13,005	−55.8	----
150	5	14,162	−60.3	----	16	14,041	−62.0	----	7	14,186	−64.0	----	20	14,125	−62.8	----	22	13,982	−61.2	----	----	----	----	----	15	13,979	−57.4	----
125	----	----	----	----	----	----	----	----	----	----	----	----	16	15,255	−65.2	----	13	15,139	−61.6	----	----	----	----	----	6	15,191	−58.9	----
100	----	----	----	----	----	----	----	----	----	----	----	----	5	16,585	−65.6	----	----	----	----	----	----	----	----	----	----	----	----	----

Standard pressure surface (mb.)	San Antonio, Tex. (987.6 mb.)				San Juan, P. R. (1,013.7 mb.)				Santa Maria, Calif. (1,005.6 mb.)				Sault Ste. Marie, Mich. (991.7 mb.)				Spokane, Wash. (947.0 mb.)				Swan Island, W. I. (1,012.5 mb.)				Tacubaya, Mexico (775.3 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	240	26.4	56	30	15	26.2	84	30	71	15.2	83	30	221	12.6	85	30	598	16.8	57	30	10	27.0	83	27	2,306	15.1	72
1,000	30	129	(*)	----	30	135	25.3	84	30	119	14.8	82	30	149	(*)	----	30	129	(*)	----	30	120	26.5	83	27	84	(*)	----
950	30	588	25.9	54	30	590	22.1	86	30	567	19.0	52	30	588	13.1	76	30	571	(*)	----	30	574	23.1	84	27	546	(*)	----
900	30	1,057	22.5	58	30	1,055	19.1	85	30	1,022	21.6	29	30	1,035	10.7	76	30	1,032	15.2	51	30	1,043	20.2	81	27	1,021	(*)	----
850	30	1,552	18.8	63	30	1,545	16.1	81	30	1,516	19.9	27	30	1,510	8.2	74	30	1,513	11.7	53	30	1,535	17.4	76	27	1,513	(*)	----
800	30	2,070	15.3	61	30	2,059	13.4	77	30	2,034	16.8	26	30	2,009	5.8	66	30	2,017	8.1	56	30	2,051	14.4	72	27	2,040	(*)	----
750	30	2,617	12.0	53	30	2,602	10.5	69	30	2,583	13.1	27	30	2,541	3.4	58	30	2,552	4.7	58	30	2,599	11.3	67	27	2,590	12.9	74
700	30	3,190	8.7	46	30	3,173	7.6	61	30	3,156	9.5	33	30	3,093	.6	56	30	3,106	1.2	57	30	3,169	8.1	63	27	3,163	8.5	82
650	30	3,801	5.5	37	30	3,785	4.4	58	30	3,771	6.0	----	30	3,689	−2.8	58	30	3,701	−2.3	56	29	3,779	4.5	58	27	3,777	4.5	86
600	30	4,450	2.4	----	30	4,429	.8	55	30	4,417	2.4	----	29	4,312	−6.3	53	30	4,329	−6.6	62	29	4,424	.6	58	27	4,423	.8	88
550	30	5,150	−2.0	----	30	5,123	−3.2	50	30	5,117	−1.8	----	29	4,990	−9.9	49	30	5,003	−10.8	61	29	5,117	−3.6	55	27	5,118	−3.1	82
500	30	5,898	−6.7	----	30	5,872	−7.5	44	30	5,865	−6.9	----	29	5,717	−14.4	48	29	5,735	−15.1	56	29	5,866	−7.7	54	27	5,869	−7.2	74
450	30	6,721	−12.2	----	29	6,697	−12.6	----	30	6,686	−12.7	----	29	6,518	−19.6	45	29	6,531	−20.2	54	29	6,684	−12.5	53	27	6,693	−12.0	66
400	29	7,602	−18.7	----	28	7,576	−18.6	----	26	7,567	−19.2	----	27	7,365	−25.6	----	28	7,396	−26.0	----	29	7,569	−18.1	54	27	7,578	−17.4	58
350	29	8,583	−25.7	----	27	8,558	−25.8	----	25	8,546	−26.9	----	26	8,316	−32.4	----	28	8,348	−33.1	----	29	8,553	−25.0	----	26	8,563	−24.7	----
300	29	9,682	−33.5	----	27	9,656	−34.2	----	23	9,640	−35.3	----	17	9,453	−37.7	----	27	9,413	−40.9	----	29	9,654	−33.4	----	26	9,666	−33.1	----
250	29	10,938	−42.1	----	27	10,906	−44.2	----	16	10,915	−43.8	----	----	----	----	----	27	10,631	−48.7	----	29	10,908	−43.6	----	20	10,923	−43.2	----
200	28	12,415	−52.0	----	24	12,360	−55.8	----	6	12,422	−53.0	----	----	----	----	----	23	12,108	−55.5	----	27	12,368	−55.7	----	7	12,373	−55.7	----
175	23	13,276	−57.4	----	19	13,208	−61.4	----	----	----	----	----	----	----	----	----	19	12,960	−56.8	----	26	13,203	−62.4	----	----	----	----	----
150	12	14,220	−62.7	----	14	14,158	−66.5	----	----	----	----	----	----	----	----	----	13	13,922	−57.4	----	17	14,144	−68.9	----	----	----	----	----
125	----	----	----	----	5	15,242	−70.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

See footnotes at end of table.

TABLE 1.—*Mean dynamic height (geopotential) in units of 0.98 dynamic meters, temperature in degrees centigrade, and relative humidity in percent, for standard pressures, as obtained by radiosondes during September 1947*—Continued

Standard pressure surface (mb.)	Tampa, Fla. (1,014.7 mb.)				Tatoosh Island, Wash. (1,015.2 mb.)				Toledo, Ohio (996.5 mb.)				Washington, D. C. (1,018.7 mb.)			
	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity	Number of observations	Dynamic height	Temperature	Relative humidity
Surface	30	9	24.2	87	30	31	12.2	88	30	191	16.8	83	30	25	20.4	79
1,000	30	137	24.0	85	30	158	12.9	80	30	160	(*)	----	30	184	20.4	73
950	30	588	21.7	83	30	592	13.3	64	30	603	17.3	69	30	630	17.8	71
900	30	1,054	19.1	82	30	1,044	12.3	54	30	1,061	14.3	70	30	1,089	15.2	70
850	30	1,545	16.5	77	30	1,522	10.4	44	30	1,542	12.0	63	30	1,572	12.6	68
800	30	2,060	13.8	73	30	2,024	7.9	39	30	2,049	9.4	58	30	2,080	10.5	60
750	30	2,605	11.0	67	30	2,558	5.0	37	30	2,589	7.4	46	30	2,619	7.9	55
700	30	3,175	8.0	63	30	3,113	1.8	36	30	3,148	4.6	47	30	3,182	5.0	50
650	30	3,787	4.6	59	30	3,709	−1.4	35	30	3,753	1.7	38	30	3,786	1.8	49
600	28	4,437	1.0	56	30	4,341	−4.8	39	30	4,391	−1.8	----	30	4,426	−1.7	46
550	28	5,134	−3.0	54	30	5,024	−8.6	36	29	5,079	−5.9	----	30	5,115	−5.4	42
500	28	5,881	−7.1	49	30	5,753	−12.7	36	29	5,817	−10.5	----	30	5,857	−10.0	37
450	28	6,704	−11.8	51	30	6,556	−17.8	39	29	6,626	−16.0	----	30	6,667	−15.5	----
400	27	7,593	−17.7	54	30	7,420	−23.9	----	29	7,497	−22.5	----	30	7,541	−21.7	----
350	27	8,578	−24.5	----	29	8,373	−31.1	----	29	8,463	−29.8	----	30	8,504	−29.0	----
300	27	9,681	−32.8	----	29	9,448	−38.9	----	29	9,542	−38.1	----	30	9,593	−37.2	----
250	26	10,938	−42.6	----	27	10,673	−46.9	----	29	10,772	−47.3	----	30	10,827	−46.5	----
200	26	12,404	−54.4	----	25	12,126	−53.0	----	28	12,219	−56.4	----	30	12,276	−56.0	----
175	25	13,248	−60.4	----	21	12,966	−54.0	----	25	13,070	−59.7	----	26	13,129	−60.1	----
150	22	14,199	−66.7	----	15	13,928	−54.2	----	17	14,050	−61.7	----	21	14,074	−64.1	----
125	9	15,313	−71.5	----	6	15,152	−56.7	----	7	15,219	−63.5	----	19	15,183	−66.4	----
100													6	16,524	−66.0	----

[1] Data not yet received.

*Temperature and relative humidity data for this level are not available or are available only for certain days. See note entitled "Change in Summarization of Radiosonde Data," p. 6, in the January 1946 issue of the MONTHLY WEATHER REVIEW.

NOTE.—All observations scheduled between 0300 and 0500, G. C. T., except at Ciudad Victoria, Mazatlan, and Merida, where they are taken near 0200, G. C. T.

"Number of observations" refers to those of dynamic height only. (In a few cases temperature or humidity data may be missing for one or more standard pressure surfaces of some observations.) Relative humidity data are not published for standard pressure surfaces having a corresponding mean temperature below −20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 observations at the surface or 5 observations at a standard pressure level.

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during September 1947. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (534 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (100 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (276 m.)			Denver, Colo. (1,618 m.)			El Paso, Tex. (1,198 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	160	2.2	30	219	3.3	30	54	0.8	28	310	1.4	29	313	0.8	30	344	3.6	30	98	4.1	28	240	3.0	29	204	1.7	29	80	1.5	30	157	0.8	30	167	0.4	30	169	1.5
500							30	51	1.0										30	99	4.9	28	233	4.0	29	200	4.0	29	105	2.4	30	198	.8						
1,000	30	162	3.0				30	55	1.7				29	297	1.4	30	338	3.3	30	111	3.4	26	232	5.2	28	229	4.2	28	69	2.3	29	224	2.0						
1,500	30	163	2.7				28	120	.9	28	293	3.6	27	274	2.1	30	314	2.5	30	109	1.7	26	234	6.4	27	253	5.1	26	71	1.4	29	214	2.5				30	138	2.2
2,000	30	158	2.7	30	230	3.4	27	122	.2	26	287	4.8	22	266	6.4	30	282	2.9	28	102	1.6	23	244	7.5	22	254	8.2	23	43	2.8	27	234	3.4	30	189	.3	30	137	1.9
2,500	30	165	2.1	30	226	2.8	23	344	1.0	25	276	6.3	20	266	9.0	30	270	4.2	28	88	1.6	19	262	7.6	18	260	10.4	22	36	2.7	22	278	3.4	30	249	.7	30	122	1.9
3,000	27	134	1.8	30	228	2.5	22	339	1.3	22	271	7.9	19	273	10.3	30	272	5.1	28	81	1.9	16	268	9.8	16	268	11.8	22	35	2.3	21	284	5.1	30	257	2.1	30	122	2.0
4,000	26	54	1.9	30	238	1.9	19	305	2.1	19	267	11.1	16	281	15.7	28	260	7.4	27	85	2.8	15	275	11.3	12	276	14.1	19	359	1.1	19	291	7.2	29	270	6.1	30	116	1.7
5,000	24	8	1.3	30	258	3.4	16	297	2.1	17	269	14.0	12	280	16.1	24	265	9.8	23	86	2.3	11	286	13.0	11	272	16.9	18	282	1.5	15	295	8.4	26	269	8.8	29	112	1.3
6,000	25	26	1.9	29	264	4.1	15	326	3.2	14	269	14.7	10	285	18.8	23	277	12.6	22	90	1.0							18	289	2.1	13	297	9.7	21	272	10.8	29	134	.8
8,000	21	19	3.2	28	255	6.4	12	318	3.3	10	277	15.9				19	292	14.0	16	254	2.3							15	250	3.8				17	279	14.0	27	156	.8
10,000	15	344	3.3	26	283	6.3										13	283	16.8										13	253	7.8				11	289	10.9	22	305	.7
12,000	10	298	11.0	22	278	11.5																												10	296	12.5	21	276	6.2
14,000				15	276	7.9																															16	282	8.9

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,475 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (575 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (416 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	29	226	3.8	30	225	1.9	29	46	1.9	28	287	2.4	28	80	3.7	29	199	2.2	30	187	2.3	30	128	1.3	30	316	2.3	29	101	3.2	27	82	1.0	30	12	0.5	30	190	0.6
500							29	56	2.5				28	77	5.0	29	200	2.3				30	134	1.4	30	319	2.3	29	102	4.7	27	72	1.5	30	343	.2	30	214	2.2
1,000							29	66	2.0	28	303	2.4	23	60	3.0	29	220	3.0	30	189	3.2	30	142	.6	30	315	2.3	29	103	4.0	25	58	1.8	30	158	.2	29	258	3.2
1,500				30	227	1.9	27	21	.7	28	287	3.4	23	49	2.1	29	247	4.2	30	193	3.5	27	64	.7	30	300	1.3	25	65	2.3	22	58	3.8	29	170	1.2	29	280	4.7
2,000	29	223	4.2	30	243	2.8	23	310	.7	24	273	6.3	22	42	.8	26	254	6.1	30	201	4.1	27	7	1.2	30	206	1.1	25	53	2.0	18	29	4.1	25	224	1.3	29	269	5.4
2,500	29	214	6.0	30	253	3.5	19	317	.7	20	268	7.3	22	52	1.2	23	265	7.2	30	210	4.8	26	8	2.0	27	207	1.1	23	39	3.0	16	34	5.5	25	245	1.9	28	272	7.0
3,000	29	221	6.6	30	250	4.5	16	318	3.8	15	278	8.8	21	43	1.9	20	281	8.5	30	224	6.0	26	244	2.3	27	228	1.8	23	52	2.4	15	46	5.1	24	265	3.4	25	269	7.0
4,000	29	219	6.7	29	250	6.3	11	310	6.1	10	278	10.0	21	59	1.8	16	291	11.7	29	225	6.5	23	326	3.5	25	254	3.0	16	33	1.7	12	45	5.3	18	300	4.3	19	266	8.4
5,000	28	239	6.6	27	259	7.0	10	290	8.0				15	25	.5	10	303	10.2	27	226	5.9	21	337	4.5	23	264	5.2	10	245	2.0				13	326	4.9	10	280	4.0
6,000	26	254	7.9	23	266	9.0							14	194	.4				27	231	5.3	18	314	5.9	19	280	5.9							11	323	5.4			
8,000	21	252	11.1	21	273	10.2							11	276	1.9				25	252	6.3				13	291	8.0							10	332	7.6			
10,000	15	237	11.1	16	277	10.4							10	251	2.1				22	262	8.4																		
12,000	12	237	17.0	14	274	12.1													19	267	12.0																		
14,000																			10	272	16.1																		

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Cloud, Minn. (318 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (13 m.)			Sault Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	275	5.2	29	181	2.0	29	177	2.1	30	157	0.9	30	3	2.2	29	119	1.5	29	192	0.8	30	97	2.6	30	274	3.4	27	305	2.4	28	290	1.8	29	252	0.7	28	352	0.4
500	30	290	3.5	29	177	2.5	29	185	3.1	30	183	1.2				29	124	1.8	29	190	.9	30	101	3.0	30	292	4.5	27	276	2.8	28	270	1.4				28	223	.6
1,000	28	290	2.0	29	188	3.5	29	189	3.6	30	202	1.4	30	2	2.1	29	186	2.0	28	210	1.8	30	100	3.1	29	280	2.5	25	255	4.7	28	234	1.5	29	215	1.2	27	250	1.5
1,500	28	253	1.6	29	197	3.4	29	216	5.6	30	197	1.5	30	317	1.8	29	223	2.5	26	206	4.9	30	97	2.8	29	247	1.4	22	251	8.4	26	234	1.5	29	243	2.3	26	259	2.0
2,000	28	223	2.1	28	211	4.3	28	242	6.3	30	193	1.9	29	282	3.1	26	252	3.1	23	232	6.6	30	104	2.7	29	194	1.4	20	265	9.3	25	242	2.8	27	256	3.4	24	276	2.9
2,500	28	223	2.6	27	212	3.8	28	261	8.6	30	190	2.2	28	268	5.4	26	279	4.8	22	254	8.4	29	100	2.8	29	171	2.1	16	274	10.2	23	258	2.2	24	276	4.6	22	275	5.3
3,000	28	228	3.3	24	224	4.2	28	268	10.4	30	178	2.9	28	270	8.3	24	287	6.7	22	262	9.9	29	100	2.8	29	161	3.3	13	286	11.9	22	272	3.0	22	269	5.3	22	277	7.4
4,000	28	226	3.4	22	272	4.4	27	272	13.8	30	172	3.1	24	265	12.0	22	298	7.8	20	283	12.5	25	102	3.8	26	172	5.0	10	299	16.7	19	296	4.2	21	271	8.3	20	276	10.6
5,000	28	251	4.7	21	303	4.8	26	276	14.6	29	169	4.0	23	265	13.8	22	297	9.2	17	284	16.5	21	92	3.8	26	182	5.9				18	309	4.6	17	278	11.4	19	268	12.2
6,000	28	261	5.6	17	309	5.9	24	288	15.8	22	168	2.4	23	269	15.8	20	304	9.5	15	286	20.5	18	106	3.5	24	202	4.3				15	290	5.6	17	285	14.5	14	265	11.7
8,000	26	274	8.2	12	308	5.3	18	290	17.1	15	227	3.2	13	286	18.8	15	295	11.6				15	58	2.6	23	218	4.8				11	282	10.5	12	288	16.1			
10,000	15	272	10.1				11	285	14.2	13	244	3.8				12	292	12.6							16	241	2.8												
12,000							10	291	12.9	10	270	13.3													11	239	5.5												

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during September 1947*

Section	Surface to 2,500 meters (m. s. l.)					2,501 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m) m. s. l.	Date	Station
Northeast [1]	35.6	sw.	1,017	22	Portland, Maine	46.2	sw.	4,902	16	Caribou, Maine	104.0	nw.	18,345	28	Harrisburg, Pa.
East-Central [2]	28.3	wsw.	2,312	22	Elkins, W. Va.	42.0	wsw.	4,969	22	Washington, D. C.	60.0	wsw.	18,529	17	Lynchburg, Va.
Southeast [3]	35.6	se.	1,736	19	Tallahassee, Fla.	27.8	ne.	3,245	17	Tampa, Fla.	46.5	se.	9,282	21	Miami, Fla.
North-Central [4]	40.7	nw.	1,199	14	Huron, S. Dak.	51.6	wsw.	4,181	18	Sault Ste. Marie, Mich.	71.0	wnw.	7,388	24	Fargo, N. Dak.
Central [5]	47.0	sw.	1,591	18	Omaha, Nebr.	44.5	nw.	5,000	22	Joliet, Ill.	60.0	sw.	8,533	19	Lander, Wyo.
South-Central [6]	31.6	nne.	1,556	21	Tulsa, Okla.	34.4	ne.	3,140	18	New Orleans, La.	50.0	sw.	11,154	11	Big Spring, Tex.
Northwest [7]	32.9	w.	2,117	19	Havre, Mont.	51.6	wnw.	3,321	12	Ellensburg, Wash.	79.0	nnw.	10,541	14	Missoula, Mont.
West-Central [8]	33.4	sw.	2,500	16	Elko, Nev.	49.4	w.	4,713	16	Sheridan, Wyo.	73.6	wsw.	8,900	18	Bishop, Calif.
Southwest [9]	32.7	sw.	2,285	17	Las Vegas, Nev.	35.9	sw.	4,430	18	Las Vegas, Nev.	49.8	sw.	9,030	17	Las Vegas, Nev.

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

RIVER STAGES AND FLOODS FOR SEPTEMBER 1947

C. R. JORDAN

Precipitation during September was quite spotty over the United States but was below normal over a large part of the country. There were several areas of above-normal rainfall, including the South Atlantic Coast, southern Great Lakes Region, the lower Mississippi Valley, northern Great Plains and northern Rocky Mountain Regions, and the extreme tip of southern California.

There was no severe or widespread flooding during the month. Minor overflow occurred in Minnesota and excessive rainfall associated with a tropical storm produced flooding in the Everglades of Florida and at a few stations along the central Gulf Coast. Another tropical storm passed inland over North Carolina on the 24th and 25th and produced heavy precipitation over the South Atlantic Coastal area. Flood stages were reached in the upper tributaries of the Cape Fear River and again below Fayetteville, N. C. The Neuse River exceeded flood stage at Smithfield, N. C. The Dan River flooded below Danville, Va., and the Roanoke River flooded from Weldon to Williamston, N. C.

FLOOD STAGE REPORT FOR SEPTEMBER 1947

[All dates in September unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest [1]	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE	*Feet*			*Feet*	
Dan: Danville, Va.	11	25	25	12.0	25
Roanoke:					
Weldon, N. C.	31	26	29	38.3	28
Scotland Neck, N. C.	28	27	30	30.8	29
Williamston, N. C.	10	30	Oct. 6	11.1	Oct. 4
Neuse: Smithfield, N. C.	13	22	23	15.4	22
		26	26	14.2	26
Cape Fear: Lock No. 2, Elizabethtown, N. C.	20	26	30	27.8	28
EAST GULF OF MEXICO DRAINAGE					
Pearl: Pearl River, La.	12	24	25	12.2	25
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Zumbro: Thielman, Minn.	35	1	1	36.2	1
Whitewater: Beaver, Minn.	7	1	1	8.3	1
Atchafalaya Basin					
Atchafalaya: Morgan City, La.	6	20	20	6.3	20
WEST GULF OF MEXICO DRAINAGE					
Sabine: Mineola, Tex.	14	3	3	14.6	3

[1] Provisional.

CLIMATOLOGICAL DATA FOR SEPTEMBER 1947

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

[For description of tables and charts, see Review, January 1943, p. 15]

In the following tables are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Section	Temperature								Precipitation					
	Section average	Departure from the normal	Monthly extremes						Section average	Departure from the normal	Greatest monthly		Least monthly	
			Station	Highest	Date	Station	Lowest	Date			Station	Amount	Station	Amount
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	76.9	+1.2	Geneva	102	2	2 stations	37	29	2.61	−0.73	Bay Minette	13.68	Anniston	0.09
Arizona	76.4	+3.6	Gila Bend	116	2	Alpine	24	13	.72	−.61	Rimrock	3.09	7 stations	.00
Arkansas	76.0	+1.7	Conway	112	1	Harrison	36	23	3.28	−.05	Oden	7.50	Osceola	.70
California	70.1	+2.3	Cow Creek	120	2	Bridgeport Dam	18	18	.10	−.32	Huntington Lake	1.48	99 stations	.00
Colorado	62.0	+3.9	Eads	107	3	Fraser	13	15	1.07	−.29	Summetville	4.13	3 stations	.00
Florida	79.2	−.2	3 stations	98	1 2	Niceville	42	30	10.52	+3.77	St. Lucie Lock No. 2	22.27	Compass Lake	2.42
Georgia	75.8	+.4	Camilla	101	2	Clayton	31	28	3.37	−.26	Folkston	14.80	Tallapoosa	.19
Idaho	57.7	+.6	Kooskia	104	2	Barton Flat	9	14	1.52	+.44	Potlatch	5.18	3 stations	T
Illinois	68.2	+.4	2 stations	102	1 4	Marengo	28	30	3.53	−.14	Keithsburg	6.34	Chillicothe	1.75
Indiana	67.6	+.4	Plymouth	99	9	Waterloo	28	27	3.98	+.68	La Porte	9.22	Jeffersonville	1.22
Iowa	67.6	+3.2	2 stations	104	1 4	Decorah	21	26	2.10	−1.92	Columbus Junction	6.37	Audubon	.30
Kansas	74.0	+4.2	Lincoln	117	3	Burr Oak	30	15	1.40	−1.43	Garnett	9.22	Dodge City	.01
Kentucky	70.1	−.3	Mayfield	103	8	4 stations	33	1 23	3.04	+.14	Farmers	6.73	Scottsville	1.09
Louisiana	79.3	+1.3	Minden	107	1	2 stations	41	1 29	4.14	+.09	Pearl River	8.76	Lake Charles	1.19
Maryland-Delaware	68.2	+.4	Keedysville, Md	95	1 14	Oakland, Md	22	27	2.98	−.38	Lewes, Del	5.43	Williamsport, Md	.60
Michigan	61.7	+1.3	4 stations	94	1 5	Watersmeet	16	25	4.48	+1.27	Wellston	8.11	Ann Arbor	1.10
Minnesota	59.0	.0	2 stations	102	8	3 stations	18	1 25	2.87	−.01	Virginia	9.41	2 stations	.87
Mississippi	77.3	+1.4	Bay Springs	103	1 4	Kipling	38	29	3.48	+.39	Poplarville	10.77	Duck Hill	.52
Missouri	71.9	+2.6	2 stations	109	1 3	Black (near)	31	23	3.83	−.21	Nevada	7.96	Tarkio	.69
Montana	55.1	−.1	Garland	102	7	Cut Bank	16	19	1.87	+.48	Loweth	4.95	Glendive	.08
Nebraska	67.1	+2.7	2 stations	112	3	Merriman	25	15	1.71	−.36	Dodge	6.83	Sedan	.20
Nevada	65.1	+3.6	Overton	115	1 1	2 stations	19	1 18	.19	−.22	Kimberly	1.26	21 stations	.00
New England	61.0	+.7	2 stations	93	1 7	Dorset, Vt	15	27	2.76	−1.01	Mansfield, Mass	7.01	Hanover, N. H	.78
New Jersey	67.0	+1.1	Burlington	95	14	Layton	19	28	2.68	−1.10	Rutherford	4.39	Charlotteburg	1.19
New Mexico	67.1	+2.6	Orogrande	106	1 4	Eagle Nest	22	15	.48	−1.26	Chama	3.10	13 stations	.00
New York	62.4	+1.1	West Point	95	7	Roxbury	15	28	2.80	−.71	Canton	6.00	Smiths Basin	.58
North Carolina	71.3	+.3	2 stations	100	1 1	Transou	23	28	5.68	+1.61	Greenville	15.86	Cullowhee	1.16
North Dakota	55.5	−1.2	2 stations	101	5	Wishek	13	22	1.45	−.12	Fessenden	5.42	Marmarth	.26
Ohio	66.2	+.5	2 stations	95	11	Millport	25	27	3.37	+.45	Jackson	5.91	New Lexington	1.20
Oklahoma	77.3	+3.1	Alba	115	3	2 stations	31	1 15	2.04	−1.15	Wister Dam	6.31	3 stations	.00
Oregon	59.3	+1.4	Drain	104	21	Fremont	10	19	.86	−.32	Valsetz	3.89	Crescent Lake	.00
Pennsylvania	64.2	.0	Phoenixville	95	20	Hawley	17	28	2.35	−1.08	Graterford	5.21	Huntingdon	.24
South Carolina	74.8	+.3	Walhalla	102	2	Caesars Head	35	28	4.76	+.67	Beaufort	11.32	Pelzer	1.34
South Dakota	62.7	+1.2	Fairfax	110	6	Pollock	16	22	1.18	−.37	Arlington	3.74	Custer	.02
Tennessee	72.7	+1.2	3 stations	103	1 7	Greenville	29	28	1.96	−1.10	Jacks Creek	5.06	Nashville Airport	.47
Texas	78.7	+1.4	Henrietta	113	1 4	2 stations	36	15	1.11	−1.88	Mount Pleasant	8.15	8 stations	.00
Utah	63.0	+2.2	St. George	107	4	Woodruff	13	14	.90	−.11	Riverdale	3.51	7 stations	.00
Virginia	68.6	.0	Columbia	100	4	Monterey	23	23	4.31	+1.07	Cardinal	11.09	Winchester	1.24
Washington														
West Virginia	66.6	+.3	Charleston	99	3	2 stations	20	27	3.52	+.55	Cairo	8.11	Inwood	.97
Wisconsin	61.8	+1.5	Menomonie	96	9	Solon Springs	12	30	3.75	+.03	2 stations	6.70	Bayfield	1.07
Wyoming	57.8	+3.0	Morrisey	101	2	Bondurant	9	15	1.14	−.02	Northeast Entrance	3.16	Newcastle	.12
Alaska (August)	50.8	−1.9	Seward	84	7	Puntilla	14	30	3.45	−.08	Little Port Walter	18.32	Candle	.10
Hawaii	75.2	+.3	Kaanapali	91	1 1	Haleakala R. S	41	19	5.88	+.18	Kahana	24.69	Umumehame	.00
Puerto Rico	78.8	+.4	Guayama	97	12	Dos Bocas	54	14	8.04	−.27	Rio Blanco (1800')	19.70	San Francisco (No. 3)	2.22

1 Other dates also.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR SEPTEMBER 1947

District and station	Elevation of instruments: Barometer above sea level [1]	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
NEW ENGLAND	*Ft.*	*Ft.*	*Ft.*	*Mb.*	*Mb.*	*Mb.*	° *F.*	° *F.*	°*F*		°*F.*	° *F.*		° *F.*	°*F.*		° *F.*	%	*In.*	*In.*	*In.*		*Mi.*								*0-10*	*In.*	*In.*	
							61.8	+1.5										81	2.77	−.4											5.1			
Eastport	75	67	82	1,017.3	1,020.0	+3.1	57.8	+2.0	86	10	66	35	28	50	28	239	50	80	2.07	−.7	.63	8	9.1	sw.	28	s.	22	10	9	11	5.5	0.0	0.0	1
Greenville, Maine	1,039	4	41	981.0	1,020.7	+2.4	54.8	−.4	88	7	68	22	29	42	38	337	49	87	2.85	−.9	.77	10	4.2	sw.	20	------	22	6	15	9	----	T	.0	1
Portland, Maine [2]	103	6	43	1,016.6	1,020.3	+2.7	59.4	+1.5	91	12	71	27	29	48	35	223	52	80	1.73	−1.4	1.13	6	8.4	s.	34	s.	2	13	7	10	4.7	.0	.0	1
Concord [3]	289	5	45	1,010.5	1,021.3	+3.3	59.6	+1.6	89	12	74	21	28	46	43	236	52	81	2.50	−1.0	1.52	6	5.7	se.	30	nw.	30	11	10	9	5.3	.0	.0	2
Burlington [2]	403	6	51	1,005.4	1,020.3	+3.4	61.8	+1.5	90	12	74	26	28	50	34	206	52	77	2.50	−1.0	.99	10	9.8	s.	35	s.	22	11	10	9	5.1	T	.0	3
Boston [2]	124	33	62	------	1,021.3	+3.7	64.8	+1.6	88	12	73	37	28	56	29	----	----	72	3.95	+.8	2.71	6	10.6	sw.	32	sw.	22	16	5	9	----	.0	.0	2
Nantucket [2]	12	4	34	1,021.0	1,021.7	+4.1	63.6	+.8	82	13	72	35	29	55	27	139	58	86	3.02	+.6	.66	7	11.4	ne.	31	sw.	2	10	12	8	5.2	.0	.0	2
Block Island	26	11	46	1,020.0	1,021.0	+3.4	65.0	+1.6	81	13	71	43	27	59	23	115	60	84	2.80	+.1	1.36	6	12.6	s.	37	n.	30	14	6	10	4.9	.0	.0	1
Providence [2]	159	65	60	1,015.6	1,021.7	+4.1	65.4	+2.2	90	13	76	36	28	55	30	133	55	82	2.96	−.2	1.64	5	7.4	sw.	32	sw.	2	14	8	8	4.8	.0	.0	3
Hartford [2]	159	5	44	1,015.6	1,021.3	+3.3	63.7	+2.0	88	13	75	30	28	52	32	158	56	83	2.97	−.5	1.31	7	6.7	s.	29	s.	22	9	11	10	5.6	.0	.0	4
New Haven [2]	107	5	39	1,017.6	1,021.3	+3.3	64.4	+2.6	86	13	74	33	27	55	32	142	56	80	3.10	−.1	1.37	8	6.5	n.	26	sw.	15	13	8	9	4.9	.0	.0	5
MIDDLE ATLANTIC																																		
							68.9	+1.6										80	3.14	.00										5.6			
Albany [2]	97	6	40	1,016.9	1,020.7	+3.1	63.4	+2.2	94	12	76	24	28	50	39	185	54	80	1.60	−1.2	.45	7	8.3	s.	30	w.	22	9	13	8	5.5	.0	.0	4
New York	314	415	454	1,010.5	1,021.7	+3.7	68.4	+1.6	87	13	76	41	30	61	28	105	58	76	2.69	−.7	.69	10	12.0	s.	41	nw.	30	10	14	6	5.3	.0	.0	6
Harrisburg [2]	374	30	49	1,008.1	1,021.7	+3.4	66.8	+1.0	90	14	77	32	28	57	31	125	56	76	1.35	−1.7	.51	6	7.1	se.	26	sw.	22	8	12	10	5.6	.0	.0	3
Philadelphia [4]	114	174	150	1,017.3	1,021.3	+3.0	69.2	+1.2	89	13	77	40	27	62	26	95	60	83	2.91	−.2	1.31	9	7.8	s.	24	nw.	30	9	13	8	5.6	.0	.0	4
Reading	323	47	306	1,009.8	1,021.3	+3.0	67.3	+.7	90	13	77	34	28	58	33	119	----	---	3.28	+.1	.97	10	9.6	se.	34	w.	4	9	9	12	5.7	.9	.0	4
Scranton	805	72	104	992.2	1,021.0	+2.7	64.5	+1.6	89	13	75	30	28	54	33	162	----	---	1.82	−1.4	.86	5	6.0	n.	31	nw.	22	5	18	7	5.3	.0	.0	3
Atlantic City	52	37	172	1,019.0	1,020.7	+2.7	69.4	+2.6	88	19	75	41	27	63	27	87	62	80	2.57	−.1	.87	10	15.2	e.	38	ne.	19	10	10	10	5.4	.0	.0	3
Trenton	190	89	107	1,014.6	1,021.3	+3.3	67.3	+.4	89	15	76	36	27	59	29	120	----	---	1.90	−1.5	.55	9	8.2	n.	29	nw.	16	9	12	9	5.5	.0	.0	5
Baltimore [4]	123	100	215	1,016.6	1,021.0	+3.0	70.0	+1.5	94	4	78	41	27	62	26	87	60	76	3.54	+.2	1.55	8	9.9	sw.	29	nw.	30	10	12	8	5.5	.0	.0	5
Washington [4]	112	56	100	------	1,021.3	+3.3	70.4	+2.3	94	4	80	40	27	61	30	87	----	77	3.70	+.5	1.14	11	6.7	n.	25	sw.	15	10	9	11	----	.0	.0	2
Cape Henry	18	8	54	1,019.3	1,020.0	+2.4	74.4	+2.6	91	5	80	52	27	69	26	23	67	82	4.53	+1.7	2.38	11	15.2	n.	42	n.	22	12	8	10	5.3	.0	.0	4
Lynchburg	686	5	58	996.3	1,021.0	+2.4	68.4	+.5	92	1	78	39	28	59	30	99	60	83	2.96	−.4	1.96	8	7.6	n.	29	n.	24	8	13	9	5.7	.0	.0	5
Norfolk [4]	91	80	125	1,016.9	1,020.3	+2.0	74.5	+2.9	94	5	81	52	27	68	27	30	65	81	4.01	+.8	1.82	10	10.5	ne.	30	ne.	25	3	16	11	6.4	.0	.0	5
Richmond [4]	144	11	52	1,014.9	1,020.0	+1.7	71.2	+.7	95	4	81	41	27	61	28	77	62	84	7.03	+3.8	4.92	12	7.1	ne.	22	n.	22	7	15	8	5.7	.0	.0	7
SOUTH ATLANTIC																																		
							74.8	+1.9										83	8.55	+4.4										5.7			
Asheville	2,253	77	92	942.1	1,020.3	+1.7	68.4	+3.4	91	5	79	37	29	58	35	80	60	84	1.85	−1.2	.57	8	7.0	se.	23	se.	27	6	15	9	5.7	.0	.0	7
Charlotte [4]	779	63	86	991.9	1,019.6	+1.6	73.6	+2.1	95	5	83	41	28	64	26	53	62	78	4.71	+1.7	3.89	9	7.2	ne.	19	ne.	24	7	15	8	5.7	.0	.0	4
Greensboro [2]	886	5	56	989.2	1,021.0	+2.7	71.1	+1.3	95	5	82	37	28	60	34	72	62	83	13.26	+10.0	7.49	11	8.4	ne.	30	n.	24	8	13	9	5.7	.0	.0	4
Hatteras	11	5	47	1,018.3	1,018.6	+1.3	76.6	+2.1	87	6	81	57	30	72	17	2	70	86	7.10	+2.5	4.22	14	12.8	ne.	36	ne.	25	2	15	13	6.5	.0	.0	8
Raleigh [4]	376	5	71	1,006.1	1,019.6	+1.6	72.4	+1.3	95	5	82	41	28	63	28	57	63	86	12.53	+8.9	5.64	16	6.8	ne.	20	ne.	24	6	13	11	6.1	.0	.0	7
Wilmington	72	73	107	1,016.3	1,018.6	+1.0	75.1	+2.0	93	4	83	50	28	67	24	14	68	87	11.99	+7.5	3.46	17	8.7	ne.	38	sw.	24	7	13	10	5.8	.0	.0	12
Charleston [4]	48	11	92	1,015.9	1,018.0	+1.1	77.2	+.6	94	3	84	54	28	70	22	4	68	88	10.18	+5.6	4.68	15	11.4	n.	38	ne.	24	12	7	11	5.6	.0	.0	8
Columbia, S. C. [4]	347	70	91	1,005.1	1,018.6	+1.0	75.8	+1.3	99	4	86	45	28	66	29	32	66	80	3.58	+.1	1.83	12	8.8	ne.	32	w.	15	11	11	8	5.1	.0	.0	5
Greenville, S. C. [3]	1,040	18	36	982.7	1,019.3	+1.7	73.8	+3.2	96	2	83	44	28	64	29	42	62	76	2.88	−.8	1.02	8	10.2	ne.	34	ne.	24	5	16	9	5.8	.0	.0	6
Augusta [4]	182	62	77	1,011.9	1,018.6	+1.7	76.8	+1.5	97	2	86	47	28	67	31	22	64	76	4.72	+1.4	2.07	6	6.4	ne.	22	nw.	15	10	14	6	5.1	.0	.0	7
Savannah [2]	65	19	51	1,015.2	1,017.6	+1.0	77.4	+3.1	96	2	86	52	28	69	26	5	69	84	14.00	+8.6	6.65	11	10.3	ne.	33	ne.	23	6	14	10	5.8	.0	.0	9
Jacksonville [4]	43	86	110	1,015.2	1,016.6	+.3	78.8	+.5	95	2	86	58	30	72	21	0	70	84	15.80	+8.4	7.56	12	9.4	ne.	32	e.	17	8	10	12	5.9	.0	.0	6
FLORIDA PENINSULA																																		
							80.7	−.3										84	11.14	+3.9										6.6			
Key West [4]	21	10	64	1,012.2	1,012.9	−1.0	82.5	+.3	91	12	88	71	29	78	15	0	74	80	6.72	.0	1.87	17	10.4	e.	42	w.	17	1	21	8	6.1	.0	.0	8
Miami	25	242	219	1,012.5	1,013.5	−1.4	79.9	−1.0	89	13	84	70	28	76	12	0	74	85	13.65	+5.0	5.75	21	15.4	e.	73	w.	17	0	16	14	7.0	.0	.0	8
Tampa [2]	35	5	36	1,013.2	1,014.6	−.3	79.6	−.3	93	9	87	62	30	72	21	0	72	86	13.04	+6.6	4.04	18	9.2	ne.	43	s.	23	4	12	14	6.7	.0	.0	16
EAST GULF																																		
							77.4	+1.4										79	3.94	−.3										4.9			
Atlanta [2]	1,173	33	72	977.3	1,018.0	+.7	75.0	+2.2	96	1	85	44	28	65	28	23	62	72	1.35	−1.7	.85	5	9.8	ne.	31	e.	23	9	15	6	5.3	.0	.0	4
Macon [4]	370	79	87	1,004.7	1,018.0	+1.1	76.4	+1.6	97	2	86	47	28	67	34	19	64	76	1.12	−2.1	.52	7	6.7	ne.	24	nw.	15	9	11	10	5.4	.0	.0	6
Thomasville	273	48	----	1,008.1	1,018.0	+1.7	77.2	+.4	96	6	86	51	28	68	30	5	----	---	4.74	−.1	1.98	7	----	----	----	----	----	----	----	----	----	.0	.0	3
Apalachicola	35	11	51	1,014.6	1,015.9	+.3	78.6	+.1	92	12	85	58	28	72	20	0	70	81	6.88	−1.2	4.70	11	10.6	ne.	54	se.	19	13	10	7	4.8	.0	.0	10
Pensacola [4]	56	54	79	1,014.2	1,016.3	+.4	78.9	+.9	94	13	86	56	30	72	27	0	70	82	12.93	+7.6	6.77	8	9.4	ne.	61	se.	19	16	8	6	4.1	.0	.0	6
Anniston	618	6	32	997.0	1,019.0	+2.1	75.6	+1.5	97	4	88	42	28	63	35	16	64	80	.10	−3.6	.07	2	----	ne.	----	----	----	9	13	8	5.2	.0	.0	8
Birmingham [2]	700	5	63	993.2	1,018.0	+.7	76.3	+3.1	95	1	87	49	28	66	35	8	64	76	.36	−3.0	.28	4	8.9	e.	33	e.	18	8	12	10	5.5	.0	.0	4
Mobile [4]	57	86	161	1,014.6	1,016.6	+1.0	78.6	+.5	96	1	87	55	29	71	24	0	68	84	6.90	+1.9	3.07	11	9.1	n.	43	e.	19	11	14	5	4.6	.0	.0	9
Montgomery [4]	218	92	105	1,009.5	1,017.3	+.7	78.2	+1.9	97	3	88	50	28	69	27	4	66	76	.87	−2.1	.59	5	7.0	ne.	24	e.	19	13	8	9	4.7	.0	.0	4
Meridian [4]	375	67	92	1,004.1	1,017.3	.0	76.8	+2.3	100	4	87	47	29	66	33	9	66	80	3.58	+.6	2.02	10	6.6	n.	31	e.	19	13	8	9	5.0	.0	.0	6
Vicksburg [4]	247	82	102	1,007.8	1,016.6	.0	77.0	+.7	98	7	87	48	23	67	27	5	66	84	4.88	+2.0	3.03	6	8.7	n.	32	ne.	19	16	9	5	4.0	.0	.0	5
New Orleans	53	76	84	1,014.2	1,016.3	+.7	80.6	+1.4	96	3	88	60	28	73	19	0	70	76	3.56	−1.5	2.95	8	7.1	ne.	45	ne.	19	9	12	9	5.4	.0	.0	6
WEST GULF																																		
							79.6	+2.0										71	2.01	−1.6										3.4			
Shreveport [2]	249	5	64	1,007.5	1,016.3	+.4	78.9	+3.0	104	3	91	49	24	67	35	2	64	72	3.52	+.7	2.39	6	8.5	n.	43	e.	7	21	4	5	3.4	.0	.0	5
Fort Smith [2]	463	6	30	1,000.0	1,015.9	+.3	77.1	+3.1	106	6	91	48	23	64	40	5	61	65	4.89	+1.9	2.15	6	7.8	ne.	29	e.	20	19	5	6	3.3	.0	.0	6
Little Rock [2]	357	26	58	1,004.4	1,017.3	+1.0	75.8	+1.7	106	1	88	48	23	64	36	11	62	69	2.96	−.2	1.81	6	8.0	sw.	36	s.	20	19	6	5	3.2	.0	.0	7
Austin [2]	605	10	41	994.9	1,016.3	+1.7	79.7	+1.4	99	1	92	53	24	68	32	0	63	65	.07	−3.3	.04	2	8.3	s.	26	ne.	22	19	10	1	3.0	.0	.0	2
Brownsville [2]	57	5	54	1,012.5	1,014.6	+2.1	82.2	+1.6	104	20	92	61	24	72	31	0	70	78	2.34	−3.5	1.31	8	9.2	se.	32	ne.	22	10	16	4	4.7	.0	.0	8
Corpus Christi [2]	20	6	33	1,014.9	1,015.6	+1.7	81.6	+3.0	102	21	92	58	24	71	30	0	69	73	1.06	------	.85	6	9.3	se.	25	se.	10	14	13	3	3.9	.0	.0	4
Dallas [2]	512	3	45	998.3	1,016.3	+1.1	79.2	+1.8	103	2	90	52	24	68	34	0	64	68	3.98	+1.3	2.04	6	8.7	s.	42	w.	11	24	2	4	2.3	.0	.0	
Fort Worth [2]	679	40	56	992.6	1,016.3	+1.4	79.2	+3.3	102	1	90	53	23	68	28	0	62	64	2.81	+.3	2.13	5	10.0	s.	33	nw.	20	23	4	3	2.4	.0	.0	4
Galveston [4]	54	122	129	1,014.2	1,016.3	+1.4	80.9	+.8	94	1	86	62	23	76	17	0	71	78	1.48	−4.1	.84	5	10.9	s.	27	ne.	22	13	14	3	4.0	.0	.0	5
Houston [4]	138	157	190	1,011.2	1,015.9	+1.0	81.0	+2.0	99	1	90	58	24	72	29	0	68	76	.83	−3.2	.34	4	8.3	s.	29	nw.	1	11	14	5	4.4	.0	.0	5
Palestine	510	64	72	999.0	1,016.6	+1.0	78.4	+1.4	100	1	88	51	24	68	28	1	64	66	1.74	−1.2	1.08	4	6.6	s.	24	se.	9	18	8	4	3.2	.0	.0	1
Port Arthur [4]	34	59	134	1,014.6	1,015.9	+1.0	80.6	+1.1	98	1	89	56	23	72	27	0	68	80	.45	−4.4	.50	6	11.3	s.	34	n.	19	17	11	2	3.3	.0	.0	5
San Antonio [2]	693	8	51	991.5	1,015.9	+1.7	80.4	+1.4	101	1	93	51	24	67	37	0	63	63	.06	−3.0	.06	1	8.2	se.	26	se.	10	15	13	2	3.8	.0	.0	0

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR SEPTEMBER 1947—Continued

District and station	Elevation of instruments: Barometer above sea level [1]	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
OHIO VALLEY AND TENNESSEE	*Ft.*	*Ft.*	*Ft.*	*Mb.*	*Mb.*	*Mb.*	°F.	°F.	°F.		°F.	°F.		°F.	°F.		°F.	%	*In.*	*In.*	*In.*		*Mi.*								*0–10*	*In.*	*In.*	
Chattanooga [2]	762	6	66	991.5	1,018.3	+.7	69.4	+1.8										77	2.41	−0.6											4.9			
Knoxville [2]	995	27	71	984.1	1,019.6	+1.6	74.6	+6.4	98	1	87	38	29	62	41	23	62	72	1.37	−0.7	.85	5	7.4	s.	28	s.	21	6	15	9	5.9	.0	.0	9
Memphis [2]	399	5	49	1,003.4	1,017.3	+.7	73.0	+3.6	96	1	84	42	29	62	32	38	60	73	1.37	−1.3	1.08	4	7.7	ne.	37	w.	15	9	17	4	5.2	.0	.0	5
Nashville [2]	546	5	72	999.0	1,018.6	+.6	75.8	+3.9	102	7	88	45	23	63	38	14	61	70	.62	−2.2	.40	6	7.8	e.	28	nw.	21	15	10	5	3.8	.0	.0	3
Lexington [2]	989	4	58	984.1	1,020.0	+1.7	73.6	+1.8	99	7	87	44	23	60	40	27	58	70	.47	−3.0	.29	5	8.2	n.	34	sw.	21	12	9	9	4.8	.0	.0	3
Louisville [2]	525	5	54	1,000.3	1,019.3	+1.3	68.2	−.3	94	5	79	38	23	57	33	104	58	80	2.65	−.4	.97	7	----	s.	--	-------	--	12	11	7	4.7	.0	.0	7
Evansville [2]	431	6	40	1,003.4	1,019.0	+1.7	69.4	+1.7	94	8	82	39	23	57	36	81	60	80	3.39	+.1	1.29	8	7.8	s.	34	s.	21	16	6	8	4.1	.0	.0	5
Indianapolis [2]	823	5	54	989.2	1,019.0	+1.4	66.4	+1.0	91	11	77	36	30	56	34	125	58	79	3.45	------	1.32	8	8.7	se.	33	nw.	11	12	9	9	4.9	.0	.0	7
Terre Haute [2]	575	4	36	998.6	1,019.3	+2.0	67.6	−.7	92	8	80	34	23	56	37	114	58	80	3.89	+.3	1.39	9	8.7	s.	32	n.	21	14	8	8	4.6	.0	.0	8
Cincinnati [4]	627	135	448	997.3	1,020.3	+2.3	70.3	+3.2	94	11	80	42	27	61	30	84	58	77	2.03	−.6	.97	6	4.3	se.	25	nw.	21	11	11	8	5.0	.0	.0	3
Columbus [4]	822	90	110	990.9	1,020.3	+2.3	68.0	+1.5	89	20	78	39	27	58	27	112	58	81	3.67	+1.1	1.46	9	8.3	s.	40	sw.	12	10	12	8	4.8	.0	.0	5
Dayton [2]	1,003	6	55	984.1	1,020.3	+2.7	66.2	+.3	89	11	76	37	30	56	28	131	56	79	2.66	−.2	1.31	9	8.8	s.	38	sw.	21	11	10	9	5.0	.0	.0	6
Elkins [2]	1,947	5	45	952.9	1,021.7	+2.4	63.4	+1.5	86	4	76	28	30	51	38	161	50	87	4.06	+.9	1.34	9	5.7	se.	34	nw.	5	4	16	10	5.9	.0	.0	7
Parkersburg	637	77	84	997.6	1,020.7	+2.1	68.0	+.7	90	20	78	37	28	58	31	110	58	78	2.18	−.6	.79	7	5.6	se.	26	nw.	21	9	12	9	5.5	.0	.0	3
Pittsburgh [3]	842	39	54	990.5	1,020.7	+2.4	66.3	+1.6	89	11	77	36	30	56	30	131	54	74	1.52	−1.1	.56	8	8.9	s.	31	nw.	15	9	14	7	5.1	.0	.0	5
LOWER LAKES							64.6	+2.4										79	3.14	+.1											5.0			
Buffalo [2]	768	34	96	992.2	1,020.3	+3.0	64.0	+2.4	91	6	74	32	23	54	32	168	54	78	2.11	−.8	.73	7	11.6	s.	40	nw.	21	7	13	10	5.6	.0	.0	3
Canton	448	10	61	1,003.7	1,019.6	+3.0	59.8	+1.0	87	6	71	27	26	49	32	242	51	78	6.00	+2.6	1.74	14	7.0	w.	29	sw.	21	10	12	8	5.4	.0	.0	5
Oswego	335	71	85	1,008.1	1,020.7	+3.4	63.4	+1.9	88	11	72	32	28	55	28	167	52	72	2.35	−.4	1.06	7	8.8	s.	26	n.	30	15	11	4	4.2	.0	.0	3
Rochester [2]	523	4	69	1,001.4	1,020.3	+2.7	63.8	+3.3	91	13	75	28	28	53	34	173	54	81	2.84	+.4	1.03	9	7.9	sw.	25	w.	2	7	14	9	5.3	.0	.0	4
Syracuse [2]	596	5	57	999.0	1,020.7	+2.7	63.4	+3.1	90	12	75	25	28	52	38	182	54	79	2.14	−.6	.71	10	8.9	sw.	40	s.	21	8	14	8	5.5	T	.0	4
Erie [4]	714	57	81	994.2	1,020.3	+2.7	66.7	+3.1	90	11	74	41	28	59	28	118	56	82	3.65	+.3	1.57	7	7.9	se.	21	s.	21	10	13	7	4.8	.0	.0	3
Cleveland [2]	762	27	54	992.2	1,019.6	+1.6	66.6	+2.8	89	11	77	33	27	56	32	127	56	78	2.51	−.8	1.12	8	9.4	s.	42	nw.	21	11	9	10	5.2	.0	.0	1
Sandusky	629	5	67	997.0	1,020.0	+2.0	67.1	+1.8	91	11	77	38	27	57	33	114	----	----	2.98	.0	1.09	11	7.8	s.	26	nw.	21	16	7	7	4.0	.0	.0	3
Toledo [2]	628	5	47	997.0	1,020.3	+2.3	65.0	+1.9	90	11	76	34	30	54	34	156	56	82	2.65	−.2	1.15	9	9.4	sw.	36	nw.	21	10	9	11	5.3	.0	.0	5
Fort Wayne [2]	857	5	34	988.5	1,019.6	+2.0	65.6	+2.5	92	11	77	32	30	54	32	154	56	79	3.41	+.4	1.05	7	8.0	s.	33	s.	21	11	10	9	4.9	.0	.0	7
Detroit [2]	730	5	77	993.6	1,020.0	+2.0	65.4	+3.0	90	11	75	35	26	56	28	150	56	78	3.96	+1.1	1.79	11	8.7	s.	33	n.	21	9	10	11	5.3	.0	.0	2
UPPER LAKES							60.9	+1.8										80	3.85	+.6											5.5			
Alpena	609	5	89	996.6	1,019.3	+2.0	59.6	+2.0	84	11	68	32	25	51	25	234	52	82	3.93	+1.0	2.15	12	10.3	nw.	30	nw.	29	5	13	12	6.3	T	.0	5
Escanaba	612	51	72	995.6	1,018.0	+1.4	58.8	+1.7	81	6	66	27	25	52	25	233	52	82	2.75	−.6	.69	12	10.7	s.	30	n.	7	9	11	10	5.6	.0	.0	6
Grand Rapids [4]	707	70	244	993.2	1,019.0	+1.7	65.8	+3.1	90	6	76	33	25	56	26	161	55	80	5.75	+2.2	3.13	10	10.5	s.	34	sw.	13	12	9	9	5.1	.0	.0	7
Lansing [4]	878	5	90	987.5	1,019.6	+2.0	62.4	+1.0	85	9	72	30	25	53	28	197	54	77	4.75	+1.8	2.07	10	7.2	s.	21	sw.	21	9	9	12	5.4	.0	.0	4
Marquette	734	44	73	990.5	1,018.0	+1.7	58.3	+.8	90	9	66	33	25	50	26	270	50	80	4.12	+.9	.86	16	8.9	s.	28	sw.	23	7	9	14	6.2	.6	.0	8
Sault Sainte Marie [2]	614	10	52	995.9	1,018.6	+1.7	56.4	+2.4	90	6	66	25	25	47	33	310	50	86	3.44	−.1	1.21	14	10.8	nw.	35	sw.	14	3	11	16	7.0	T	.0	3
Chicago [2]	673	5	38	994.2	1,018.6	+1.3	66.7	+1.8	95	3	77	35	23	56	31	139	54	74	3.26	+.1	1.67	9	8.6	s.	30	n.	22	13	9	8	4.5	.0	.0	7
Green Bay	617	5	32	995.6	1,018.3	+2.0	62.0	+1.6	88	9	71	30	25	53	28	205	53	77	2.97	−.6	.94	12	7.8	s.	26	nw.	21	11	9	10	5.1	.0	.0	5
Milwaukee [2]	681	33	66	993.6	1,018.6	+1.7	63.9	+2.9	90	19	73	35	30	55	30	179	54	78	6.03	+2.7	2.71	6	11.8	s.	32	sw.	16	10	13	7	4.9	.0	.0	6
Duluth [4]	1,133	5	47	976.0	1,017.6	+2.0	55.3	+.2	90	5	63	29	30	47	29	336	46	84	1.53	−1.8	.48	15	11.7	ne.	34	ne.	17	12	10	8	5.1	.0	.0	7
NORTH DAKOTA							56.2	−.8										68	1.84	+.3											5.6			
Fargo [2]	940	5	47	981.7	1,015.9	+1.0	57.7	−.5	99	5	70	24	22	46	43	281	46	72	2.28	+.1	1.13	10	12.8	n.	40	w.	14	11	9	10	5.5	.0	.0	4
Bismarck [2]	1,677	5	41	956.3	1,016.6	+1.7	57.0	−.3	93	2	71	25	22	44	53	275	43	66	1.50	+.3	.60	8	11.2	nw.	40	nw.	14	11	8	11	5.4	.0	.0	3
Devils Lake	1,478	11	44	963.1	1,016.9	+2.3	55.0	−.9	94	5	67	25	24	43	44	339	42	69	2.95	+1.3	1.66	9	9.0	w.	27	nw.	14	10	8	12	5.6	.0	.0	4
Williston	1,878	42	50	949.2	1,016.3	+2.1	55.2	−1.4	87	2	67	27	24	43	45	316	42	67	.63	−.5	.21	7	8.0	se.	34	w.	13	7	12	11	5.9	.0	.0	4
UPPER MISSISSIPPI							67.7	+2.8										72	3.02	−.7											4.6			
Minneapolis-St. Paul [2]	919	43	74	983.1	1,016.3	+1.1	63.1	+1.7	95	9	74	32	25	53	32	198	52	73	1.48	−1.6	.54	13	10.5	se.	32	w.	14	10	11	9	4.9	.0	.0	6
La Crosse [2]	714	5	29	991.2	1,016.9	+1.0	63.2	+1.8	92	9	74	27	30	53	33	200	54	77	4.17	+.2	1.22	10	8.4	s.	28	nw.	21	11	11	8	5.1	.0	.0	9
Madison [2]	974	27	39	983.1	1,018.3	+1.7	64.3	+2.9	94	3	76	28	30	53	36	177	54	76	3.92	+.2	2.01	8	9.9	s.	28	n.	21	11	12	7	5.0	.0	.0	4
Charles City	1,015	10	51	981.0	1,017.6	+1.3	64.4	+3.4	93	9	75	31	26	54	32	171	----	----	1.49	−2.2	.48	6	6.3	s.	37	s.	9	14	7	9	4.4	.0	.0	5
Moline [2]	606	6	50	995.9	1,018.6	+1.7	68.2	+4.3	96	3	80	35	30	57	32	117	54	69	5.13	+1.6	4.55	5	9.4	s.	27	sw.	16	12	10	8	4.8	.0	.0	6
Des Moines [4]	860	5	99	-------	1,017.3	+1.4	69.4	+3.8	100	8	81	38	30	58	35	103	53	62	.58	−3.1	.32	6	9.7	se.	29	sw.	10	12	11	7	----	.0	.0	4
Dubuque	699	60	79	992.6	1,018.0	+1.4	66.8	+2.8	92	3	77	34	30	57	32	142	55	73	2.22	−1.8	.89	7	5.4	s.	23	nw.	4	15	9	6	4.5	.0	.0	3
Burlington [2]	702	4	36	992.6	1,018.0	+1.1	68.6	+2.2	97	4	81	36	30	56	34	107	56	74	4.66	+.2	4.37	5	10.2	s.	31	w.	4	12	11	7	4.6	.0	.0	5
Cairo	357	5	99	1,005.4	1,018.0	+1.4	73.2	+.7	98	8	83	45	23	63	30	43	----	----	2.40	−.5	1.15	6	8.3	ne.	28	n.	21	16	8	6	3.9	.0	.0	6
Peoria [2]	609	7	26	996.3	1,018.6	+1.3	68.2	+4.9	93	3	79	38	23	57	31	109	54	71	2.49	−1.5	1.35	6	9.1	se.	26	sw.	14	15	7	8	4.5	.0	.0	6
Springfield, Ill. [4]	636	5	191	995.6	1,018.3	+1.7	70.3	+2.7	96	3	81	40	30	60	31	80	56	76	5.03	+1.4	2.62	6	11.2	s.	32	n.	21	14	10	6	4.3	.0	.0	6
St. Louis [2]	568	33	59	997.6	1,018.0	+.7	72.4	+1.9	97	8	83	43	30	62	31	56	----	64	2.64	−.8	1.79	5	11.8	s.	34	s.	21	18	5	7	----	.0	.0	5
MISSOURI VALLEY							69.8	+3.6										62	2.24	−1.0											4.5			
Columbia, Mo. [4]	784	6	66	989.5	1,017.6	+1.0	72.8	+3.4	103	8	85	43	23	61	36	50	54	62	3.34	−1.0	2.76	5	7.2	s.	26	se.	21	19	7	4	3.7	.0	.0	3
Kansas City [2]	963	38	76	989.5	1,016.5	+.9	73.8	+4.9	109	3	85	43	30	63	35	41	54	55	4.01	−.2	3.21	5	11.0	sw.	37	sw.	10	13	12	5	4.2	.0	.0	3
St. Joseph [2]	967	5	51	982.1	1,016.3	+.7	72.0	+3.6	107	3	85	40	30	59	37	55	56	64	1.57	−2.4	.82	6	7.8	s.	24	nw.	21	18	7	5	3.9	.0	.0	6
Springfield, Mo. [2]	1,324	5	50	970.9	1,017.6	+1.0	71.9	+3.5	104	7	84	42	23	60	35	44	56	67	4.69	+1.2	2.19	7	11.6	s.	37	n.	21	16	10	4	3.9	.0	.0	4
Topeka [4]	987	65	87	981.4	1,016.3	+.4	73.9	+5.2	110	3	86	43	30	61	39	39	56	63	1.11	−2.7	.81	4	9.5	s.	25	sw.	10	13	12	5	4.2	.0	.0	2
Lincoln [4]	1,189	6	81	973.2	1,015.6	+.7	71.0	+4.6	101	3	83	39	23	58	38	84	52	60	1.72	−1.3	1.00	6	9.9	s.	29	s.	9	13	10	7	4.3	.0	.0	5
Omaha [2]	1,105	5	68	977.0	1,016.3	+.7	69.7	+4.0	100	8	82	38	25	58	36	88	54	64	.79	−2.4	.47	8	11.6	s.	32	s.	10	15	7	8	4.4	.0	.0	6
Valentine	2,598	46	54	925.2	1,016.3	+1.1	63.8	+1.3	101	5	79	35	25	49	47	140	43	55	.74	−.6	.51	5	8.9	n.	29	nw.	14	12	10	8	5.2	.0	.0	4
Sioux City [2]	1,138	5	40	976.3	1,015.9	+.7	66.2	+3.7	101	8	79	33	25	53	42	142	52	64	2.25	−.8	1.85	8	9.9	se.	33	sw.	9	13	9	8	5.0	.0	.0	5
Huron [2]	1,301	5	41	968.8	1,015.6	+.4	62.6	+1.3	101	3	77	27	22	48	51	182	47	64	2.21	+.6	1.06	8	11.8	se.	41	se.	27	7	12	11	6.0	.0	.0	8
NORTHERN SLOPE							59.3	+2.2										59	1.32	+.2											5.8			
Billings [2]	3,570	16	39	893.3	1,016.3	+.4	59.3	−.9	93	2	71	41	19	48	43	214	42	60	1.39	------	.47	9	11.2	sw.	45	nw.	15	6	12	12	6.0	T	.0	0
Havre	2,507	11	67	928.2	1,017.3	+2.4	56.8	+.4	93	2	68	32	19	45	42	286	40	60	1.74	+.4	.95	9	9.4	sw.	40	nw.	13	3	12	15	7.1	.0	.0	0
Helena [2]	4,124	5	43	876.4	1,018.3	+3.1	56.0	+.6	94	2	69	28	19	43	52	283	40	64	3.05	+1.8	1.32	10	8.6	w.	42	nw.	13	5	12	13	6.4	5.3	.0	2
Missoula [2]	3,263	4	32	904.8	1,018.6	+2.3	55.8	+2.3	87	4	69	28	14	43	46	282	42	65	1.70	+.4	1.18	9	6.1	se.	33	nw.	13	8	8	14	6.1	T	.0	2
Kalispell	2,973	48	56	914.3	1,017.3	+2.4	54.4	+.9	86	4	66	31	14	43	41	318	43	68	.99	−.2	.31	8	5.5	w.	20	nw.	13	9	8	13	6.1	T	.0	0
Miles City [2]	2,371	5	28	932.6	1,016.5	+.9	59.9	----	101	7	73	36	25	47	48	210	39	54	.31	------	.27	3	----	----	--	-------	--	8	10	12	6.2	.0	.0	1
Rapid City [2]	3,259	5	56	903.2	1,015.9	+.3	62.1	+1.9	98	7	77	33	15	47	45	164	40	52	.31	−.9	.11	4	14.2	nw.	49	nw.	13	8	10	12	5.7	.0	.0	7
Cheyenne [2]	6,094	22	40	816.8	1,015.2	+.6	60.6	+3.6	92	2	76	33	14	46	43	175	39	52	.78	−.4	.40	8	9.8	nw.	35	n.	14	10	9	11	5.4	.0	.0	9
Lander [2]	5,352	6	30	837.8	1,015.9	+1.0	60.6	+4.9	92	2	76	32	14	45	44	180	38	50	.63	−.3	.35	4	8.0	sw.	37	sw.	5	15	11	4	3.8	T	.0	5
Sheridan [2]	3,790	5	38	886.2	1,016.3	+.7	60.2	+3.9	98	7	74	34	14	46	44	201	40	56	1.89	+.6	1.33	7	8.2	nw.	39	w.	3	10	10	10	5.4	T	.0	3
North Platte [4]	2,821	11	51	917.7	1,015.2	.0	66.4	+4.3	101	2	81	36	15	52	42	113	49	64	1.77	+.4	1.34	5	7.0	n.	24	ne.	24	9	13	8	5.4	.0	.0	5

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR SEPTEMBER 1947—Continued

District and station	Elevation of instruments: Barometer above sea level [1]	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Wind: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
MIDDLE SLOPE	Ft.	Ft.	Ft.	Mb.	Mb.	Mb.	°F.	°F.	°F.		°F.	°F.		°F.	°F.		°F.	%	In.	In.	In.		Mi.								0–10	In.	In.	
Denver [4]	5,292	106	113	841.2	1,015.6	+1.0	73.5 67.6	+4.7 +4.7	94	2	80	39	15	55	43	73	40	54 46	0.96 .54	−1.1 −.4	.40	5	7.2	s.	26	ne.	13	10	14	6	3.9 5.1	.0	.0	4
Pueblo [3]	4,690	5	36	859.5	1,015.2	+1.3	68.4	+3.8	98	3	86	35	15	51	51	49	42	48	.45	−.3	.44	3	8.2	w.	34	n.	14	12	13	5	4.5	.0	.0	7
Concordia	1,392	50	58	966.5	1,015.2	.0	73.8	+5.5	112	3	86	42	30	61	38	49	51	51	.13	−2.5	.06	4	9.6	s.	22	sw.	17	14	12	4	3.7	.0	.0	3
Dodge City [3]	2,509	5	58	928.9	1,015.2	+.3	74.0	+4.6	106	3	88	44	15	60	39	19	51	52	.01	−1.9	.01	1	17.5	se.	45	n.	14	17	9	4	3.9	.0	.0	4
Wichita [3]	1,358	52	64	968.2	1,015.6	+.7	75.4	+4.8	108	3	88	46	23	63	37	17	52	53	.25	−2.8	.11	4	15.9	s.	36	s.	9	19	8	3	3.7	.0	.0	2
Oklahoma City [4]	1,214	10	47	973.6	1,015.9	+.7	78.2	+5.4	106	6	90	52	23	66	30	0	60	63	2.43	−.6	.99	4	8.6	s.	20	w.	9	22	5	3	2.5	.0	.0	3
Tulsa [3]	674	10	60	992.2	1,015.9	----	76.9	+4.0	107	4	89	48	23	64	40	7	60	66	3.90	+.8	2.19	5	10.9	s.	38	sw.	11	17	8	5	3.8	.0	.0	4
SOUTHERN SLOPE							76.4	+3.7										49	.57	−2.0											2.9			
Abilene [3]	1,738	4	59	955.6	1,015.2	+1.0	79.2	+5.4	105	2	92	54	23	66	34	0	54	48	.31	−2.4	.29	2	12.6	s.	31	n.	11	18	9	3	3.1	.0	.0	3
Amarillo [3]	3,676	5	42	892.1	1,015.0	+.1	74.0	+6.2	102	2	90	43	15	58	46	11	48	46	.24	−2.1	.24	1	14.9	s.	43	n.	14	20	8	2	2.9	.0	.0	1
Del Rio	960	63	71	981.7	1,014.6	+1.7	80.4	+1.2	102	2	92	57	24	69	33	0	61	58	1.34	−1.6	1.34	1	7.1	se.	21	e.	12	18	7	5	3.4	.0	.0	1
Roswell	3,566	75	85	894.0	1,015.2	+1.7	72.2	+1.9	98	3	89	46	30	55	47	3	44	44	.39	−1.7	.38	2	8.1	s.	33	n.	14	24	6	0	2.2	.0	.0	3
SOUTHERN PLATEAU							78.2	+4.3										41	.39	−.6											3.2			
El Paso [3]	3,778	36	85	888.3	1,013.2	+2.0	76.4	+4.1	97	3	90	55	29	63	35	0	42	34	.02	−1.2	.02	1	8.3	se.	40	sw.	8	23	6	1	2.3	.0	.0	1
Albuquerque [3]	4,972	5	45	841.5	1,013.9	+2.0	72.6	+4.7	95	3	86	51	13	59	33	0	40	36	.67	−.2	.44	5	8.8	sw.	34	se.	15	22	7	1	2.3	.0	.0	4
Flagstaff	6,907	34	48	795.8	1,018.6	+6.4	62.1	+4.9	90	2	80	35	13	45	48	102	39	52	.64	−1.1	.36	4	----	w.	--	-------	--	6	20	4	5.0	.0	.0	6
Phoenix [4]	1,107	39	87	972.2	1,010.2	+1.7	87.4	+4.7	112	2	101	67	29	73	36	0	52	37	.39	−.4	.20	2	6.6	se.	26	se.	6	20	5	5	3.4	.0	.0	3
Tucson [3]	2,555	5	31	925.5	1,011.5	+3.0	83.0	+3.3	105	4	97	63	8	69	34	0	51	39	.47	−.7	.21	3	----	se.	--	-------	--	14	8	8	4.2	.0	.0	8
Yuma	142	9	54	1,004.4	1,009.1	+1.3	88.0	+4.3	115	1	103	66	13	73	39	0	60	46	.17	−.2	.16	2	4.8	s.	18	w.	17	24	3	3	2.1	.0	.0	1
MIDDLE PLATEAU							64.4	+3.2										40	.26	−.4											2.9			
Reno [3]	4,527	20	52	864.2	1,016.3	+3.1	61.4	+3.4	97	1	84	27	20	39	60	136	34	44	T	−.3	T	0	7.1	s.	29	sw.	6	21	9	0	2.1	.0	.0	0
Winnemucca	4,339	5	56	870.0	1,016.3	+1.7	61.4	+2.2	97	4	83	26	19	40	56	151	28	32	.04	−.4	.03	2	7.5	ne.	30	sw.	16	20	10	0	2.6	.0	.0	2
Modena	5,473	10	46	836.1	1,014.2	+1.7	64.2	+4.2	92	2	82	34	15	46	52	89	----	---	.01	−.8	.01	1	10.9	sw.	38	s.	17	23	7	0	2.4	.0	.0	2
Salt Lake City [3]	4,357	32	58	869.3	1,015.6	+2.4	65.0	+2.3	98	2	80	36	20	50	44	110	40	46	1.01	.0	.91	5	9.4	se.	34	s.	2	16	9	5	3.6	.0	.0	4
Grand Junction [3]	4,602	5	26	862.2	1,015.2	+1.7	70.0	+3.8	94	2	84	42	15	56	38	27	38	36	.26	−.7	.24	3	9.7	se.	46	s.	30	15	11	4	3.8	.0	.0	13
NORTHERN PLATEAU							61.6	+1.3										53	1.00	+.3											4.8			
Baker [4]	3,471	36	54	898.1	1,018.3	+2.0	58.4	+2.4	93	1	75	26	19	42	47	224	37	59	.66	−.1	.33	7	5.8	s.	30	sw.	25	12	13	5	4.6	.0	.0	4
Boise [3]	2,739	5	49	921.1	1,015.9	+1.3	62.8	+1.6	97	2	78	34	19	48	40	136	38	45	.80	+.3	.43	4	9.0	se.	34	nw.	13	14	12	4	4.2	.0	.0	3
Pocatello [3]	4,478	5	31	865.6	1,017.3	+3.1	60.4	+1.1	96	2	77	32	20	44	48	181	35	44	.99	+.2	.98	3	8.6	sw.	42	sw.	13	16	11	3	3.9	.0	.0	4
Spokane [3]	1,929	6	51	948.9	1,017.6	+2.7	59.0	−.2	89	2	72	37	14	46	38	200	44	60	1.57	+.7	.89	6	6.3	ne.	28	n.	13	9	4	17	6.2	.0	.0	3
Walla Walla	991	57	65	981.0	1,016.6	+1.7	66.0	+2.2	94	1	78	37	18	54	36	74	----	---	1.10	+.2	.41	7	4.9	w.	18	sw.	9	13	9	8	4.7	.0	.0	3
Yakima [3]	1,076	4	54	978.3	1,017.3	+2.1	62.7	+.9	91	22	80	34	18	46	47	116	45	39	.86	+.3	.36	6	----	w.	--	-------	--	10	11	9	5.0	.0	.0	2
NORTH PACIFIC COAST							61.0	+1.7										73	.97	−1.3											5.2			
North Head	211	5	55	1,011.2	1,018.6	+2.0	58.4	+1.9	92	21	64	46	19	53	32	220	52	84	1.84	−1.2	1.27	9	12.1	n.	43	s.	8	9	8	13	5.8	.0	.0	0
Seattle [4]	125	90	321	1,014.2	1,018.6	+2.0	61.0	+.7	79	1	69	44	18	53	24	127	52	76	.81	−1.0	.53	5	7.2	n.	25	nw.	17	6	11	13	6.2	.0	.0	0
Tacoma	194	172	201	1,011.5	1,018.3	+1.7	59.7	+2.4	81	22	68	42	18	52	27	166	----	---	1.14	−1.0	.47	4	6.7	n.	25	sw.	9	12	11	7	4.9	.0	.0	2
Tatoosh Island	86	5	61	1,015.9	1,019.3	+2.7	54.2	+1.2	68	22	59	45	18	49	17	319	50	89	1.49	−3.2	.53	11	11.0	s.	36	s.	3	9	8	13	6.1	.0	.0	0
Medford [3]	1,329	29	58	969.5	1,016.6	+2.0	65.3	+1.8	95	23	84	35	20	46	55	64	44	55	.16	−.5	.09	4	----	s.	--	-------	--	17	10	3	3.1	.0	.0	0
Portland, Oreg. [4]	154	68	106	1,012.5	1,018.3	+2.4	65.2	+3.5	92	21	75	46	19	55	36	67	52	69	.96	−1.0	.56	6	5.3	nw.	16	nw.	13	12	6	12	5.3	.0	.0	1
Roseburg	510	45	76	999.7	1,018.3	+2.4	63.1	+.2	96	21	77	39	19	49	53	97	49	66	.41	−.9	.16	6	3.6	n.	18	n.	13	12	10	8	4.8	.0	.0	1
MIDDLE PACIFIC COAST							67.7	+2.9										58	.18	−.4											3.0			
Eureka	66	72	88	1,015.9	1,018.3	+2.0	57.6	+1.7	80	21	63	46	17	52	24	230	52	82	.59	−.4	.53	4	5.3	nw.	20	n.	19	8	14	8	5.2	.0	.0	0
Red Bluff [3]	353	5	26	1,000.0	1,012.5	----	77.5	+4.4	104	12	94	51	17	61	42	6	36	27	.15	−.6	.14	3	7.1	nw.	26	nw.	2	25	3	2	2.1	.0	.0	0
Sacramento [4]	66	92	115	1,010.5	1,012.9	+1.0	74.3	+5.0	100	12	90	46	19	58	39	8	48	48	T	−.4	T	0	6.5	s.	22	sw.	16	27	3	0	1.2	.0	.0	0
San Francisco [4]	155	112	132	1,009.1	1,014.9	+1.4	61.4	+.5	92	20	68	51	14	54	36	136	52	77	T	−.4	T	0	9.8	w.	30	w.	17	18	9	3	3.5	.0	.0	0
SOUTH PACIFIC COAST							73.4	+3.7										62	.09	−.1											2.9			
Fresno [3]	327	5	34	1,000.7	1,011.9	+.7	77.0	+5.0	105	2	96	47	19	58	44	2	48	43	T	−.2	T	0	5.5	nw.	22	nw.	2	24	4	2	1.9	.0	.0	0
Los Angeles	338	236	263	1,001.4	1,013.5	+1.3	72.2	+3.2	96	1	83	55	19	62	31	1	58	67	.09	−.1	.09	1	5.1	w.	17	w.	26	19	9	2	2.8	.0	.0	0
San Diego [3]	87	20	55	1,010.2	1,013.5	+1.6	71.1	+2.9	89	15	79	58	19	63	28	0	61	75	.18	+.1	.11	2	6.2	nw.	15	n.	11	12	16	2	3.9	.0	.0	
WEST INDIES																																		
San Juan, P. R.	82	9	54	1,011.9	1,014.6	+35.9	79.8	−.7	87	29	84	72	3	75	12	0	73	82	3.86	−2.0	.88	18	8.4	e.	27	e.	4	2	13	15	7.3	.0	.0	1
ALASKA																																		
Anchorage [3]	132	6	44	1,005.1	1,010.2	----	47.2	−.6	63	16	54	24	20	41	28	532	41	78	4.28	+1.7	1.22	22	5	n.	26	s.	16	2	4	24	8.4	.4	.0	0
Fairbanks [3]	454	5	63	993.9	1,011.2	----	41.2	−2.5	64	14	52	11	20	30	37	714	32	72	1.73	+.4	0.47	13	5	nw.	19	sw.	17	4	5	21	7.4	2.8	2.7	2
Juneau [4]	80	6	32	1,011.9	1,014.9	----	49.5	−.2	64	16	55	33	6	44	30	463	46	86	11.09	+4.0	1.67	24	7	e.	31	se.	10	1	2	27	8.8	.0	.0	0
Nome [3]	22	9	75	1,011.9	1,011.9	----	39.0	−2.7	56	8	46	23	30	32	23	777	34	84	1.78	−.9	.79	10	13	n.	36	n.	16	4	7	19	7.2	.7	.0	0
Barrow	29	12	31	1,011.7	1,012.2	----	31.6	+.8	41	3	34	20	30	29	13	1,004	30	92	.06	−.4	.02	6	13	ne.	32	w.	20	0	0	30	9.1	.7	.6	0
Bethel [3]	38	5	31	1,009.3	1,010.8	----	42.0	−3.2	56	10	48	25	25	36	24	696	37	82	1.52	−1.5	.56	13	10	nw.	40	s.	16	2	7	21	8.1	T	.0	0
Cordova [3]	48	5	32	1,008.8	1,010.5	----	48.0	−.3	64	15	54	33	20	42	31	508	46	90	22.77	+9.8	7.43	26	----	e.	--	-------	--	1	1	28	9.0	0	.0	0
Gambell	32	5	32	1,013.2	1,014.2	----	37.6	−3.3	46	2	40	29	18	35	10	822	34	84	.87	−1.0	----	10	16	n.	48	n.	7	2	5	23	8.0	.1	.0	----
Ketchikan	20	69	90	1,016.9	1,017.6	----	54.6	+.9	66	23	59	43	4	50	19	311	50	86	18.73	+6.6	5.42	19	6	se.	26	se.	10	1	4	25	8.6	.0	.0	0
Kotzebue [3]	16	4	31	1,011.5	1,011.9	----	38.3	−2.2	54	7	44	22	30	33	19	801	34	81	1.27	+.3	----	13	12	nw.	34	w.	1	6	5	19	6.9	.2	.0	----
McGrath [3]	338	4	28	1,010.8	1,010.8	----	40.6	−3.3	56	1	49	19	20	32	26	731	35	78	2.79	+.3	1.01	13	----	w.	35	s.	17	1	4	25	8.2	T	.0	0
Northway [3]	1,721	4	31	948.5	1,011.9	----	40.3	−1.9	63	1	49	20	20	32	31	741	34	77	2.06	+.3	.78	13	5	w.	23	nw.	18	0	3	27	8.7	3.0	.0	0
HAWAII																																		
Honolulu [4]	38	86	98	1,014.9	1,016.3	----	78.6	+.4	85	22	83	71	12	74	12	0	68	72	2.23	+1.0	1.09	13	8	ne.	21	ne.	2	4	18	8	6.0	0	.0	0

[1] Height of barometer cistern above mean sea level on January 1, 1900, or when station was first established after that date. When station is moved to new location or airport, the pressure is reduced to the original elevation for homogeneity. These elevations do not represent the present station elevation in most cases.

[2] Data are from airport records. Pressures adjusted to original elevation according to note [1].

[3] Barometric, hygrometric, wind, character of day, and average cloudiness from airport records; remaining data from city office records.

[4] Barometric and hygrometric data from airport records; remaining data from city office records.

[5] Barometric, temperature, degree day, and hygrometric data from airport; remaining data from city office records.

[6] Bihourly hygrometric data.

NOTE.—Unless otherwise indicated, data in table are city office records.

SEVERE LOCAL STORMS FOR SEPTEMBER 1947

[The table hereunder contains such data as have been received concerning severe local storms that occurred during the month. A revised list will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Port Neches, Jefferson Co., Tex.	1	4:45 p. m.	1,150		$5,200	Wind	Principal damage to utility lines.
St. Joseph and Marshall Cos., Ind.	1	Afternoon			100,000	Wind and hail	Buildings damaged; trees and wires down.
Medina County, Ohio	1	8 p. m.	175	0	50,000	Tornado	Moved from northwest; path 15 miles long. Corn damaged, poultry killed, automobiles smashed, 3 barns destroyed, and roller skating rink wrecked.
Burgettstown, Pa	2	2:15 a. m.	100	2	100,000	do	20 persons injured; 5 homes destroyed, 15 other homes damaged. Several commercial buildings, a machine shop, and a lumber yard destroyed. Telephone and electric power disrupted. Path 10 miles long.
Hawley, Pa	2	Morning				Electrical	Lightning killed 8 cows, 1 horse, and a few chickens.
New England, southern and central.	2	All day		1	20,000,000	Thunderstorms	A series of storms. In a few restricted localities damage was greater than in hurricanes of 1938 and 1944. In Windham County, Conn., near Danielson, a "twister" was reported about 2 p. m., but no evidence showed tornadic character. Storm from south-southeast in path 75 feet wide and 3 miles long. It completely destroyed a large barn and 400-foot chicken house in village of Mashentuck. "Cone-shaped" clouds with evidence of circular and vertical movement seen about 11:20 a. m., near Brockton and South Easton, Mass. Storm from southwest. In Brockton, residences, barns, and small business plants unroofed; fires caused by lightning. Storm from southwest. Damage also quite heavy at Melrose, Mass., and Derry, N. H.
Coleman, Md	4	P. m.				Wind, thunderstorm, and hail.	Many trees broken and uprooted. A silo and corn crib blown over.
Jackson County, Ohio	5	2:45 p. m.	[1] 10			Wind, rain, hail, and lightning.	Hail damage to roofs, cars, and crops moderate; corn, beans, and gardens damaged by wind and rain. Basements flooded: 4 inches of rain in about 2 hours. Public utility lines damaged by wind and lightning.
Gallia County, Ohio	5	5 p. m.	440	0		Tornado	Moved from north; path 1 mile. 2 silos blown down; 2 barns partly unroofed; trees blown down; smaller streams overflowed and roads flooded; some hail damage to corn and tobacco.
Springfield, Clark Co., Ohio.	5				3,000	Lightning	Lightning struck church.
Hawley, Pa	5					Electrical	Lightning struck and burned a barn and contents.
Hyde, Sully, Hughes, Potter, Faulk Cos., S. Dak.	5-6				2,000,000	Fire	Prairie fire covering 500 square miles, destroyed stacked hay, hayland, farm buildings, and fences, and killed some livestock and poultry.
Cameron, S. C	8	Early evening			6,000	Lightning	Fire from lightning burned a barn and destroyed contents, including 6 mules and 500 bushels of wheat.
Miner County, S. Dak	8	do				High wind, rain, and lightning.	Wrecked several farm buildings and flattened corn fields.
Hibbing and Virginia, Minn., and vicinities.	9-10				208,000	Thunderstorms	Several buildings unroofed or otherwise damaged; power and communication lines down; trees uprooted. A barn destroyed by fire after being struck by lightning. Heavy rains flooded streets, basements, and main floors of many homes and business establishments, open-pit iron mines, roads, highways, and farm lands; railroad tracks and a bridge washed out; much soil erosion occurred; growing crops damaged. An unofficial measurement of 8.60 in. of rain in about 5 hours was reported from Hibbing, Minn.
Swift, Kandiyohi, Renville, Hennepin, and Goodhue Cos., Minn.	10	3-7:40 p. m.	880	1	40,000	do	Several barns and outbuildings demolished or damaged; roof of railroad car and large electric sign torn away; farm machinery and automobiles damaged; poles and wires down; trees uprooted; 3 persons injured; livestock killed.
Owatonna, Minn	11	A. m.			42,000	Electrical	Barn at the Owatonna State School entirely destroyed by fire after being struck by lightning; 21 head of cattle perished and others received serious burns.
Reedy, W. Va., and vicinity	11	4-6 p. m.				Heavy rain and lightning.	Streets, cellars, garages and gardens flooded. One house struck by lightning slightly damaged.
Tahlequah, Okla	11	P. m.		1		Electrical	Light service disrupted.
West Palm Beach, Fla	13	Afternoon		0	0	Tornado	Funnel cloud observed but did not reach ground.
Meridian, Miss	14					Thunderstorm	Considerable damage to fairgrounds; grandstand unroofed; storm attended by light hail.
Somerset, Pa	14				25,000	Electrical	A barn struck by lightning and burned.
Clarksville Red River Co., Tex.	15	1 a. m.	[1] 1		1,500	Wind	Damage to plate glass windows, awnings, and utility lines.
Newport, Tenn	15	2 p. m.			10,000	Electrical	1 home and 1 barn destroyed by lightning.
Meadville, Pa	15	3 p. m.			15,000	do	Lightning struck and burned a large barn and contents.
Stratford, Conn	15	3:55 p. m.		1		Wind	1 workman killed when a large section of roof was ripped off by a sudden gust of wind; velocity at Bridgeport Airport, 74 m. p. h.
Ghent, N. Y	15	P. m.				Electrical	Struck by lightning, a large barn and contents burned.
Gaffney, S. C	15	During night		1		Lightning	
Philadelphia, Pa	16			1		Electrical	
Florida, southern portion	17	About 8 a. m.-midnight.		11	31,800,000	Hurricane	The center of storm went inland at Fort Lauderdale about 11:30 a. m., moved westward across the State at about 10 m. p. h., and passed to the Gulf just north of Naples around 10 p. m. The highest wind recorded by a reliable instrument, 155 m. p. h., at Hillsboro Light, near Pompano, at 12:56 p. m., on 17th; lowest pressure, 27.97 inches at 11:25 a. m. same date and place, very close to north edge of calm center. Rains of 6 to over 8 inches on top of completely saturated and partly flooded country, resulted in great and extensive flooding of rich farm lands and pastures. Red Cross sheltered over 40,000 people, evacuated from dangerous locations. 6 additional deaths by indirect causes, i. e. accidents, electrocutions, etc.; 186 injured. Homes destroyed, 205; seriously damaged, 10,543. Damage is estimated as follows: Property, $10,800,000; crops (including 6,000,000 boxes of citrus), $10,000,000; trees and shrubbery, $2,000,000; highways, bridges, and city streets, $2,500,000; piers, docks, seawalls, bulkheads, and a few small craft, $3,000,000; power and communications, $1,500,000; cost of clean-up and removal of debris, $2,000,000. Cuban fishing vessel, "Antonio Cerdedo," sank off Fort Myers with loss of 7 of crew. More details will appear in the annual summary of hurricanes, Monthly Weather Review, December 1947.
Eden Valley, Wyo	18	3 p. m.	[1] 4		30,100	Hail	Approximately $30,000 damage to growing crops, principally small grain; $100 damage to buildings. Hailstones ranged in size from walnuts to hens' eggs.
Apalachicola, Fla	19	12:30 a. m.	85	2	250,000	Tornado	Tornado passed through residential section; demolished 27 houses, partly demolished 31 houses, and uprooted numerous trees. 15 persons seriously injured, and 85 received minor injuries.

See footnote at end of table.

SEVERE LOCAL STORMS FOR SEPTEMBER 1947—Continued

[The table hereunder contains such data as have been received concerning severe local storms that occurred during the month. A revised list will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
McClusky, N. Dak.	19	7:30 a. m., C. S. T.	2,000		$50,000	Hail	Many roofs and car tops damaged and windows broken; hail size of hens' eggs.
Donaldson, Minn.	19	10 a. m.	440		6,000	do	Considerable damage to automobile tops and roofs of buildings; many windows broken. Some poultry killed; 1 person injured.
Louisiana, entire State	19	All day		12	24,000,000	Hurricane	This storm, which crossed southern Florida on the 17th, moved inland over southeastern Louisiana during the forenoon of the 19th, with the eye passing northwestward over Baton Rouge from about 2 p. m. to 2:20 p. m., C. S. T. Eye approximately 30 miles in diameter. Lowest pressure observed in eye, 28.61 inches at New Orleans City Office. Highest 1-minute velocity observed at Moisant Airport near New Orleans was 98 m. p. h., just before employees ran to safety in nearby buildings when part of the roof of the Administration Building gave way; wind estimated to have reached 110 m. p. h., with gusts to 125 m. p. h. A storm wave 10 to 12 feet above normal high tide swept across the Louisiana coast. Greater portion of damage over Louisiana and Mississippi apparently due to water. 95 persons injured. Red Cross figures on damages are as follows for Louisiana (mostly southeast coast): Homes destroyed, 396, damaged, 4,111; barns destroyed, 8, damaged, 17; business buildings, etc. destroyed, 458, damaged, 1,767. Additional damage estimated as follows: Cotton $3,750,000; truck $300,000; rice $300,000; pecans $150,000; citrus $500,000; timber $1,000,000; communications and power lines, etc., $2,000,000; homes, barns, other buildings, $16,000,000. More details will appear in the annual summary of hurricanes, Monthly Weather Review, December 1947.
Miss., south of 33° latitude, mostly coastal.	19	All day		22	28,438,000	Hurricane	654 people injured. The Red Cross reports damages to buildings, etc., as follows: Homes destroyed, 524, damaged, 7,557; barns destroyed, 125, damaged, 402; business and other buildings destroyed, 291, damaged, 560; boats destroyed, 42, damaged, 168. Damage estimated as follows: cotton $400,000; truck $75,000; pecans $725,000; tung nuts $75,000; corn $725,000; timber $1,000,000; communications and power lines, etc., $4,000,000; railroad tracks and bridges $1,250,000; homes, barns, other buildings, etc. $15,188,000. More details will appear in the annual summary of hurricanes, Monthly Weather Review, December 1947.
Harrisburg, Pa.	21	2 a. m.				Thunderstorm	Strong winds snapped branches of trees and shrubbery.
Maxwell Ferry, Winn Parish, La.	21	Early morning				Severe thunderstorm.	Severe thunderstorm struck Maxwell Ferry, damaging several houses and barns, and uprooting and breaking considerable timber.
Ohio, entire State	21	Evening				Wind	Considerable damage to wires, trees, telephone poles, signs, etc.
Penn Line, Pa.	21					Thunderstorm	Strong winds blew down trees, electric and phone wires.
Western, central, and northern New York.	21–22					Wind	Winds, reaching gale force, crossed the State, blew down trees, damaged public utility lines, buildings, and fences. 3 hangars and a plane demolished. 5 persons injured in automobile accidents caused by falling trees. Monetary loss unquestionably very high.
Tampa, Fla., 40 miles south.	22	1:30 p. m.		0		Tornado	Sighted by airline pilot.
Seffner, Fla., 15 miles west of Tampa.	22	6:10 p. m.		0	5,000	do	3 small houses demolished; trees broken.
Tampa, Fla.	22	6:30 p. m.		0	1,000	do	Trees and communication lines broken; roofs damaged.
Ocala, Fla.	23	4:30 a. m.		0	4,000	do	Unroofed 2 homes, broke telephone and power lines, uprooted or broke trees.
Jacksonville, Fla.	23	9–11 a. m.	50–100	0	4,000	do	3 sections of the city affected by these storms: Norwood, Murray Hill, and Panama Park. Damage to roofs, trees broken or uprooted, telephone and power lines broken.
Atlantic Shores, Fla. south of Jackson Beach.	23	9–10 a. m.	50	0	3,000	do	Path about 500 yards long. Damage to roofs, telephone and power lines; trees broken and uprooted.
Adamsville, Fla., near Jacksonville Beach.	23	9–10 a. m.		0	500	do	1 person injured.
Arlington, Fla., Duval County.	23	10 a. m.	100–200	0	5,000	do	One house moved off foundation; roofs damaged; trees broken or uprooted.
Jacksonville, Fla., south side.	23	10:30 a. m.	800	0	4,000	do	Path 2 miles or more long. Roofs damaged, trees broken or uprooted, and telephone and power lines broken.
Florida, Tampa to Jacksonville.	23			0	100,000	Tropical disturbance.	Moved up west coast; moved inland near Tampa about 5 to 6 p. m., and passed west of Jacksonville during night. Winds about 60 m. p. h. along coast from Sarasota northward to near Cedar Keys, and squalls of 40 to 60 m. p. h. quite general over Peninsula. Heavy rainfall aggravated flood situation. Some damage to beaches and transmission lines. Series of small tornadoes occurred on northern edge. See below.
Lewis and Nez Perce Counties, Idaho.	26	Late evening				Heavy rain, hail, and wind.	Storm caused considerable crop damage, mostly to newly planted wheat fields, impeded work on highways, disrupted power and communication lines, and carried away top soil. Flash flood on Sweetwater Creek damaged roads and washed out 4 bridges.
Butte, Mont.	27	Afternoon				Heavy hail and rain	1 small fire started by lightning; power service temporarily disrupted, and basements in the lower portions of the city flooded.
Sherman and Wasco Cos., Oreg.	27–28	6 p. m.–after midnight.	300		4,000	Thunderstorm	Storm severe near Oregon-Washington border. Damaged planted grains, washed soils, and caused slides across railways and highways. Heavy electric discharges damaged power lines.
Lake Lowell, near Nampa, Idaho.	28	5:30 p. m.		3		Wind squall	A sudden wind squall capsized a small motorboat; 3 people drowned
Denver, Colo.	30	4:15 p. m.		1		Lightning	A Denver University football player killed and 4 team mates slightly injured when lightning struck the field.

[1] Miles instead of yards.

LATE STORM REPORTS FOR JUNE—AUGUST 1947

The table hereunder contains such data as were received concerning severe local storms during these months. A revised list will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
	June						
Howell County, Mo.	1	3:40–4:15 p. m.	440–880	1	$20,000	Tornado, rain, hail.	Storm from west struck Olden, Pomona, Dripping Springs, White Church, and Peace Valley; path 15 miles long. Serious injury to 2 persons; damage to farm homes, buildings, outbuildings, timber, wires, orchards, and fences; livestock and poultry killed. 1 hailstone reported found that measured 7 inches around. Roads and highways blocked by fallen trees.
De Kalb County, Mo.	4	10:45–11 p. m.	440–880	0	10,000	Tornado	Storm from southwest, struck near Oak and Clarksdale, damaging one house, several barns, outbuildings, trees, and orchards. 1 person slightly injured; livestock and poultry killed. Path 4 miles long.
Dade County, Mo.	5	7–7:15 a. m.	50–67		3,000	Wind	Storm from northwest struck business district of Lockwood. Roofs of 3 buildings blown off; 2 dwellings and numerous outbuildings damaged; many trees felled or broken. Storm accompanied by heavy rain which came through damaged roofs, accounting for about one-half of damage.
Clay County, Mo.	6	8:08–8:14 p. m.	200–660	0	100,000	Tornado	Storm from west-southwest, veering to west-northwest, struck near Excelsior Springs, passed through Crescent Lake and over Lake Maurer. Two or three houses totally destroyed; other houses and outbuildings partially destroyed; livestock killed; telephone wires, growing crops, gardens, and trees damaged. A few persons slightly injured. Path 2½ miles long.
St. Louis City and St. Louis County, Mo.	8	1–2 a. m.			1,000	High wind, thunderstorm.	Storm from south disrupted power and telephone service. Lightning struck a chimney and a church, with $1,000 resultant fire damage.
Holt County, Mo.	12	Morning				Electrical	Barn near Forbes struck by lightning and burned. A combine, feed grinder, 40 tons of hay, and 6,000 bushels of corn lost.
Sullivan County, Mo.	17	do		1		do	1 man and several head of livestock killed near Browning.
St. Louis City and St. Louis County, Mo.	25	7–7:45 p. m.				High wind, thunderstorm.	Trees and public utility lines blown down. Storm from northwest.
Butler County, Mo.	27	8:45–8:55 a. m.	100	0	10,000	Tornado, rain, hail.	Storm from southwest struck Harviell, damaging houses, barns, and automobiles. Many telephone lines down. Length of path 11 miles.
Greene and Webster Cos., Mo.	27	6–6:30 a. m.	[1] 5		10,500	High wind	A line-squall wind of 56 m. p. h. from northwest struck Springfield, resulting in heavy damage to trees, power and telephone lines, an airplane, and an automobile. Some evidence of a tornado, but it did not touch ground. Damage at Springfield estimated at $10,000. Also struck Seymour: trees and wires broken; service disrupted; damage, $500.
St. Louis City and St. Louis County, Mo.	29	4:30–5 a. m.				High wind, thunderstorm.	Storm from the northwest. Trees and wires blown down and electric service disrupted; damage to wheat crop by wind.
Marion County, Mo.	30			2		Electrical	Two children killed and another injured when lightning struck a tree on farm near Emerson.
Sullivan, Linn, and Crawford Cos., Mo.	30	11:30 a. m.–12:25 p. m.; also, 6 p. m.				High wind, hail	Storm from southwest. High winds, quite general over State, resulted in considerable damage. Near Browning, limbs blown from trees, one house blown down, and outbuildings damaged. In Linn County, heavy hail accompanied the wind, damaging roofs and car tops, and killing frying chickens. Some stones measured 9½ inches in circumference. At Cuba, Crawford County, trees and wires damaged by wind at 6 p. m.
Boone County, Mo.	30	1:10–2:15 p. m.	[1] 2		1,000	High wind	Storm from northwest occurred at Columbia and vicinity to south and southwest, blowing down trees and wires and damaging farm buildings and roofs. Path 10 miles.
Cass and Johnson Cos., Mo.	30	4–5 p. m.	440	0	60,000	Tornado	Storm from west-northwest struck Kingsville and Holden; seriously injured 1 person, destroyed 6 residences, damaged many other buildings, killed chickens, and tore down trees and power and communication lines. Strong wind damaged trees at Strasburg. Path 7 miles long.
	July						
Condon to Umatilla, Oreg., then northward into Washington.	10	4:20–5:30 p. m.	[1] 1 to 25	1	(3)	Wind, dust, hail, rain.	One man killed when struck by branch broken in wind. Grain elevators blown down, considerable acreage of standing wheat and other grain crops destroyed. Dust reduced visibility to only a few feet.
Deschutes Valley, Jefferson County and Wasco County to western border Morrow County, Oreg., then northward into Washington.	14	2:50–5 p. m.	[1] ¼ to 3		(3)	Hail, wind, rain	Storm from southwest. Damage serious to wheat fields just ready for harvest: some, one hundred percent losses. Other grains and hay fields suffered. Some hailstones resembled ice cubes.
	August						
Giles County, Tenn.	6	Afternoon		2		Thunderstorm, hail	Damage to crops by hail. 2 persons killed by lightning.
Montgomery, Ala., near	6	2–3 p. m.			15,000	Wind, thunderstorm	A hangar unroofed and 11 light planes damaged or destroyed at Allenport air field.
Nashville, Tenn.	6	7 p. m.				Electrical, wind, hail.	300 telephones out of order; electrical power lines down. Hail damage to crops.
Putnam County, Tenn.	6	P. m.			10,000	Thunderstorm, high winds.	Large saw mill struck by lightning burned. Many trees down; heavy crop damage.
Baton Rouge, La.	7					Wind, thunderstorm	Several buildings damaged; electrical service disrupted; one man injured by falling glass.
Jackson, Miss.	8	1 p. m.		1	5,000	Severe thunderstorm, high wind, light hail.	Lightning caused 1 death, damaged several homes and a cotton warehouse, splintered many trees.
Harrisburg, Pa.	9	Evening				Thunderstorm	Lightning caused several minor fires; crops damaged by wind and rain.
Beaver Canyon, Utah	9					Heavy rain	Erosion of watersheds and roads.
Cameron-Cedar Ridge, Coconino County, Ariz.	11				3,000	Thunderstorm	Flash flood damaged roads and dikes and washed out water system at Cameron, Ariz.
Winslow-Joseph City, Navajo County, Ariz.	11				2,000	Rain	State highway department reported damage to structures, drainage, and shoulders on U. S. 66.
Pennsburg, Pa.	12	Night		2		Electrical	Two persons killed by lighting; five others felled momentarily.
Beaver Canyon, Utah	12					Heavy rain	Erosion of watersheds and roads.
Grenville, N. Mex., near	14	P. m.				Flashflood	Washed out section of highway.
Hawley, Pa.	15					Thunderstorm	Much damage to trees and gardens; a few buildings burned when struck by lightning.
Magdalena, N. Mex., near	19	P. m.		1		Lightning	
Carlisle, Pa.	19	Night				Electrical	Barn struck by lightning destroyed.
Deer Flat and Caldwell, Canyon County, and Mesa, Adams County, Idaho.	20	Afternoon				Hail	Crop damage mostly near Deer Flat and Caldwell.

See footnotes at end of table.

LATE STORM REPORTS FOR JUNE—AUGUST 1947—Continued

[The table hereunder contains such data as were received concerning severe local storms during these months. A revised list will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
	August						
Newellton, Tensas Parish, La.	20				$500	Lightning	
Houma, Terrebonne Parish, La.	20				1,500	do	
Mercer, Pa	20					Electrical	Several barns burned and others damaged.
Oil City, Pa	20			1		do	Lightning struck and killed a swimmer.
Franklin County, Idaho	21	2 p. m	[1] 4		40,000	Hail	Hailstones ½-inch in diameter; storm from southwest; path 5 miles long. Damage to grain, corn, sugar beets, and tomatoes.
Grants, N. Mex	21	P. m				Lightning	Fluorspar mill struck by lightning burned.
Bryce Canyon, Utah	21					Heavy rain	3.81 inches in 24 hours. Considerable damage to roads.
Chaco Canyon, N. Mex	22	4:30 p. m			1,000	Flash floods	Considerable damage to highways and irrigation ditches; also damage to ruins in National Monument.
Coconino and Yavapai Cos., Ariz.	23				2,000	Rain	State Highway Department reported shoulders washed out, drainage and oil cake damaged, on U. S. 66, 2 miles north of Bridgeport.
Bedford County, Pa	26			1		Electrical	Boy killed by lightning.
Fredericksburg, Pa	26			1		do	
Garfield, N. Mex	29	3:00 p. m			10,500	Hail, heavy rain	Damage to cotton and chili crop.
Wallace, Idaho, vicinity of	29	6:15 p. m	[1] 9		500	Wind	Communications and power lines down, windows broken, and trees uprooted. Storm from northeast, accompanied by hail and rain; path about 12 miles long.
Carville, Iberville Parish, La.	31				1,000	Lightning	

[1] Miles instead of yards.

[2] $250,000 to $500,000 damage from storms of 10th and 14th in Oregon.

SOLAR RADIATION AND SUNSPOT DATA FOR SEPTEMBER 1947

[Solar Radiation Investigation Section, I. F. HAND in Charge]

SOLAR RADIATION OBSERVATIONS

TABLE 1.—*Solar radiation intensities during September 1947*

[Gram calories per minute per square centimeter of normal surface]

MADISON, WIS.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	0.0°	P.M. 60.0°	70.7°	75.7°	78.7°	Vapor pressure: 7:30 a.m.[1]	1:30 p.m.[1]
	Air mass: 4.81	3.84	2.88	1.92	*0.96	1.92	2.88	3.84	4.81		
September	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*	*mb.*
2	0.71	0.84	1.01	1.13	1.28	------	------	------	------	16.5	15.8
3	.47	.65	.81	1.01	1.23	------	------	------	------	17.0	16.5
6	.60	.74	.88	1.04	1.32	------	------	------	------	16.5	21.8
9	------	------	.49	.66	.96	------	------	------	------	22.6	25.9
15	.77	.96	1.13	1.22	1.43	------	------	------	------	9.4	9.1
17	.55	.66	.86	1.10	1.30	------	------	------	------	11.4	12.3
18	------	------	.75	.96	1.28	------	------	------	------	20.4	19.6
19	.60	.73	.87	1.04	1.19	------	------	------	------	19.6	22.6
22	.81	1.01	1.15	1.33	1.48	------	------	------	------	6.1	4.2
23	------	------	------	------	------	------	------	------	------	6.4	8.1
26	.80	.95	1.07	1.25	1.45	------	------	------	------	5.1	5.3
30	------	.96	1.06	1.19	------	------	------	------	------	4.8	6.4
Means	.66	.83	.92	1.08	1.29	------	------	------	------	------	------
Departures	−.05	−.02	−.06	−.05	−.08	------	------	------	------	------	------

LINCOLN, NEBR.

	Air mass: 4.77	3.81	2.86	1.91	*0.95	1.91	2.86	3.81	4.77		
September	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*	*mb.*
4	------	------	------	------	1.44	1.08	0.86	------	------	21.1	16.4
5	------	------	1.01	1.12	1.43	1.19	1.06	0.94	0.86	16.4	14.6
8	------	------	.92	1.03	1.30	.97	.75	------	------	15.3	17.7
13	------	------	------	------	1.35	------	------	------	------	11.0	13.2
17	------	------	------	.99	1.25	.86	.54	.35	------	16.9	25.0
19	------	------	------	------	1.21	.99	.82	------	------	19.0	20.4
22	------	------	1.11	1.24	1.33	------	------	------	------	5.6	4.8
23	------	------	------	------	1.27	1.10	.94	------	------	7.2	9.1
25	------	------	.96	1.14	1.35	1.10	.92	.79	.71	6.1	10.6
Means	------	------	1.00	1.10	1.33	1.04	.84	.69	(.80)	------	------
Departures	------	------	+.03	−.04	−.07	−.11	−.13	−.14	+.08	------	------

BLUE HILL, MASS.

	Air mass: 4.86	3.89	2.92	1.94	*0.97	1.94	2.92	3.89	4.86		
September	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*	*mb.*
1	0.88	0.99	1.12	------	1.40	------	------	------	------	11.6	13.0
3	------	------	------	1.12	------	------	------	------	------	17.4	17.9
4	.65	.74	.86	1.07	------	1.12	0.92	0.75	0.66	17.5	18.4
6	------	------	------	------	------	------	.55	------	.26	21.1	22.6
7	------	------	------	------	------	------	------	------	.41	21.4	25.3
8	------	------	------	------	------	.59	------	------	------	23.7	15.5
9	.50	------	.75	1.00	------	.97	.80	.64	.56	14.4	14.7
10	.55	.69	.78	.96	------	.95	.68	.56	.45	17.4	19.5
13	------	------	.57	.75	------	------	------	------	------	24.5	21.3
17	.88	.98	1.08	1.27	------	1.20	1.04	.91	------	10.2	9.6
18	.74	.83	.95	1.12	------	1.11	.95	.84	.72	12.5	13.2
20	------	------	------	------	------	1.30	1.12	.97	.84	8.7	8.2
23	------	------	------	------	------	1.35	1.15	1.05	.96	5.0	5.5
26	.78	.86	------	1.23	------	1.24	------	.95	.81	6.1	5.7
27	1.03	1.12	1.22	------	------	------	1.09	.96	.83	4.4	5.0
28	.97	1.06	1.18	1.29	------	1.24	1.10	.97	.86	5.5	6.5
29	.97	1.06	1.18	1.29	------	------	1.11	.97	.88	7.8	9.3
30	------	------	------	------	------	1.37	1.20	1.08	.99	12.6	7.0
Means	.80	.93	.97	1.11	(1.40)	1.13	.98	.89	.71	------	------
Departures	+.03	+.05	−.02	−.02	+.02	+.01	+.05	+.10	+.05	------	------

SOLAR RADIATION OBSERVATIONS—Continued

TABLE 1.—*Solar radiation intensities during September 1947*—Contd.

BOSTON, MASS.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	0.0°	P.M. 60.0°	70.7°	75.7°	78.7°	Vapor pressure: 7:30 a.m.[1]	1:30 p.m.[1]
	Air mass: 4.96	3.96	2.97	1.98	*0.99	1.98	2.97	3.96	4.96		
September	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*	*mb.*
3	------	------	------	1.10	------	------	------	------	------	17.7	17.7
17	------	------	------	1.20	------	0.90	------	------	------	10.2	12.7
18	------	------	------	.46	------	1.09	------	------	------	13.7	12.7
26	------	------	1.16	1.26	------	------	------	------	------	6.1	6.9
Means	------	------	(1.16)	1.00	------	(1.00)	------	------	------	------	------
Departures	------	------	+.27	−.01	------	+.11	------	------	------	------	------
Ratio, Boston/Blue Hill, on comparable dates	------	------	------	.85	------	.86	------	------	------	------	------

CLIMAX, COLO.

	Air mass: 3.24	2.59	1.94	1.29	*0.65	1.29	1.94	2.59	3.24		
September	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*	*mb.*
1	------	------	1.26	1.43	1.52	1.35	1.22	1.10	1.00	------	------
2	------	------	------	1.44	1.55	1.27	------	------	------	------	------
7	------	------	1.24	1.39	1.53	------	------	------	------	------	------
12	------	------	1.34	1.47	1.61	1.46	1.33	1.22	1.13	------	------
13	------	------	------	1.51	1.63	1.48	1.37	1.26	1.18	------	------
14	------	------	1.31	1.44	1.60	1.46	------	------	------	------	------
15	------	------	1.36	1.50	1.60	1.46	1.35	1.26	1.17	------	------
16	------	------	------	1.46	1.58	1.42	1.26	1.13	1.05	------	------
20	------	------	------	------	------	1.44	1.30	1.20	1.13	------	------
21	------	------	------	1.48	------	1.44	1.30	1.18	1.12	------	------
22	------	------	------	1.48	------	1.46	1.33	1.21	1.14	------	------
23	------	------	------	1.47	------	1.37	1.18	1.12	1.01	------	------
25	------	------	------	1.44	------	1.42	1.28	1.15	1.03	------	------
26	------	------	------	1.40	------	------	1.22	1.04	.89	------	------
Means	------	------	1.30	1.45	1.58	1.42	1.29	1.17	1.08	------	------
Departures	------	------	−.02	+.01	+.04	+.02	+.02	+.02	+.03	------	------

TABLE MOUNTAIN, CALIF.

	Air mass: 3.76	3.01	2.26	1.51	*0.75	1.51	2.26	3.01	3.76		
September	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*	*mb.*
3	------	------	------	1.32	------	------	------	------	------	------	------
4	------	------	------	1.35	------	------	------	------	------	------	------
5	------	------	------	1.36	------	------	------	------	------	------	------
6	------	------	------	1.40	------	------	------	------	------	------	------
7	------	------	------	1.40	------	------	------	------	------	------	------
8	------	------	------	1.35	------	------	------	------	------	------	------
9	1.09	1.17	1.28	1.39	1.52	------	------	------	------	------	------
11	------	------	------	1.31	------	------	------	------	------	------	------
12	------	------	------	1.41	------	------	------	------	------	------	------
13	------	------	------	1.41	------	------	------	------	------	------	------
18	------	------	------	1.48	------	------	------	------	------	------	------
24	------	------	------	1.32	------	------	------	------	------	------	------
25	------	------	------	1.41	------	------	------	------	------	------	------
26	------	------	------	1.34	------	------	------	------	------	------	------
27	------	------	------	1.35	------	------	------	------	------	------	------
28	------	------	------	1.35	------	------	------	------	------	------	------
29	------	------	------	1.40	------	------	------	------	------	------	------
30	1.23	1.31	1.39	1.49	1.60	------	------	------	------	------	------
Means	(1.16)	(1.24)	(1.34)	1.38	(1.56)	------	------	------	------	------	------
Departures	+.02	+.02	+.02	−.01	.00	------	------	------	------	------	------

[1] 75th meridian time. *Extrapolated.

Explanations of the tables and references to descriptions of instruments, stations, methods of observation, and summaries of data are given in the Monthly Weather Review, vol. 72, page 43, January 1944. A list of pyrheliometric stations is given on page 45 of the same Review. An explanation of the formula used in computing the air mass values for each station will be found in vol. 75, page 47, March 1947.

TABLE 2.—*Daily totals and weekly means of solar radiation (direct+diffuse) received on a horizontal surface*

[Gram calories per square centimeter]

Date	Washington, D. C.	Madison, Wis.	Lincoln, Nebr.	New York, N. Y.	Fresno, Calif.	Fairbanks, Alaska	Columbia, Mo.	Boston, Mass.	Nashville, Tenn.	Twin Falls, Idaho	La Jolla, Calif.	Riverside, Calif.	Blue Hill, Mass.	Newport, R. I.	Salt Lake City, Utah	Put-in-Bay, Ohio	State College, Pa.	Davis, Calif.	East Wareham, Mass.	New Orleans, La.	Toronto, Canada	Boulder, Colo.	Pearl Harbor, Hawaii	Honolulu, Hawaii
1947	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*
Sept. 3	504	512	419	369	629	168	398	417	532	519	374	551	544	503	482	312	396	578	436	559	534	408	450	578
Sept. 4	453	287	588	286	604	378	370	481	365	516	391	560	560	558	548	418	284	576	517	553	506	543	477	396
Sept. 5	104	478	612	108	586	390	580	263	456	477	399	556	275	246	457	184	183	579	271	380	326	467	407	628
Sept. 6	105	542	576	232	611	243	586	416	506	511	518	556	326	200	460	444	383	579	357	627	463	381	405	358
Sept. 7	198	462	482	434	594	314	576	333	462	193	378	462	311	372	348	429	167	553	358	494	434	356	474	448
Sept. 8	270	398	574	361	577	227	485	319	345	432	403	496	338	460	521	476	378	524	205	408	427	186	511	563
Sept. 9	337	445	399	126	602	132	456	489	297	480	463	434	528	517	308	486	320	563	500	513	426	300	547	551
Means	282	446	521	274	600	264	493	388	423	447	418	517	412	417	446	392	302	565	378	505	445	377	467	503
Departures	−109	+66	+82	−88	+37	+54	+2	+35	+21	−52	−65	+21	+30	+2	------	−32	−59	+20	−7	+74	+51	−65	----	----
Sept. 10	286	451	504	342	594	236	352	466	334	521	514	382	524	507	426	422	266	567	481	351	415	262	360	450
Sept. 11	400	274	79	255	570	206	150	436	440	508	412	503	476	510	543	476	377	562	468	360	308	117	458	575
Sept. 12	487	126	217	376	534	149	393	420	330	508	185	534	501	478	525	489	346	559	473	376	240	538	186	185
Sept. 13	509	311	575	406	576	139	590	326	462	489	206	528	303	476	550	388	377	543	428	559	187	362	412	426
Sept. 14	499	347	501	366	572	127	480	85	525	509	393	499	130	98	541	537	340	522	165	303	473	478	609	683
Sept. 15	201	492	551	218	424	138	574	278	134	490	446	497	328	378	505	121	405	509	304	306	239	473	591	525
Sept. 16	393	202	461	372	468	26	566	259	557	451	498	507	271	286	272	540	467	383	232	570	411	422	574	638
Means	397	315	413	334	534	146	444	324	398	496	379	493	362	390	480	425	368	521	365	403	325	379	456	497
Departures	+16	−27	−5	−23	+3	−48	+5	+6	+29	+23	−71	+25	−4	+10	------	+43	−36	+15	+6	+32	−20	−59	----	----
Sept. 17	502	484	486	450	380	144	567	484	460	118	116	112	532	521	268	488	462	436	494	477	425	398	494	687
Sept. 18	485	457	519	449	595	125	514	446	528	350	445	506	504	506	119	478	462	537	468	520	362	430	527	638
Sept. 19	443	445	514	406	575	204	501	60	422	489	515	498	136	298	474	471	414	580	258	------	129	243	580	613
Sept. 20	24	352	342	462	544	290	256	544	457	478	348	396	548	396	550	397	1	550	446	------	246	494	473	553
Sept. 21	225	242	530	242	351	204	285	111	415	462	170	148	169	174	487	274	164	507	154	------	211	520	593	687
Sept. 22	117	510	526	70	418	288	579	66	321	429	479	472	58	87	440	340	175	426	116	------	378	474	539	550
Sept. 23	450	435	516	469	494	164	560	484	540	374	456	450	502	526	395	504	473	468	490	------	304	492	587	668
Means	321	418	490	364	479	203	466	314	449	386	361	369	350	358	390	422	307	501	346	------	294	436	542	628
Departures	−44	+62	+83	+36	−11	+36	+66	+27	+91	−43	−42	−89	−2	+9	------	+72	−30	+13	+37	------	−4	+20	----	----
Sept. 24	84	234	330	163	448	58	521	248	377	432	394	459	277	224	447	466	233	486	230	------	294	176	422	500
Sept. 25	284	410	482	126	507	107	480	69	462	322	387	471	99	68	444	452	379	500	87	------	466	477	551	594
Sept. 26	500	465	468	497	507	233	527	438	422	426	469	465	498	424	457	515	375	494	465	------	382	333	445	511
Sept. 27	500	324	284	479	502	218	328	420	401	393	247	462	504	504	432	480	456	492	477	------	436	248	522	565
Sept. 28	462	177	435	435	488	128	302	445	458	313	197	466	482	432	389	377	452	471	440	------	405	374	527	503
Sept. 29	458	262	240	334	483	16	276	421	301	423	456	468	484	496	286	61	255	492	454	------	21	281	579	452
Sept. 30	366	425	184	457	500	22	488	166	218	339	405	382	202	200	253	242	445	474	115	------	392	265	508	527
Means	379	328	346	356	491	112	418	315	377	378	365	453	364	336	387	370	371	487	324	------	342	308	508	522
Departures	+32	+28	−10	+46	+33	−23	+58	+38	+35	−52	−7	+9	+24	+2	------	+40	+26	+30	−21	------	+54	−56	----	----
ACCUMULATED DEPARTURES ON SEPTEMBER 30, 1947																								
	+6,118	+924	−910	−5,726	+8,050	------	------	−651	+343	−224	−5,397	+8,050	−868	−4,662	------	------	−6,776	+3,346	------	------	−2,933	−14	----	----

ADDITIONAL DATA FOR EAST LANSING, MICH., JULY 1947

Week beginning—	Mean	Departure
July 5	488	−36
July 12	408	−37
July 19	370	−108
July 26	508	+16

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947

By LUCY T. DAY

[Equatorial Division, U. S. Naval Observatory]

[Communicated by the Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive towards the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day under Mount Wilson group number, longitude, latitude, area of spot or group, and spot count, are included respectively: number of groups, assumed longitude of center of the disk, assumed latitude of center of the disk, total area of spots and groups, and total spot count.

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1947	h m		°	°	°	°				
Sept. 1	10 19	8810	−85	208	−12	85	242	3	G	U. S. Naval.
		8809	−76	217	−3	76	24	1		
		8809	−70	223	−2	70	61	1		
		8807	−60	233	+10	60	339	6		
		8806	−43	250	−15	46	194	1		
		8803	−32	261	−12	36	121	7		
		8803	−28	265	−10	33	145	11		
		8801	−22	271	+17	23	121	15		
		8802	−21	272	−16	31	170	1		
		8799	−16	277	+15	17	145	1		
		8798	−14	279	−16	27	97	3		
		8798	−9	284	−16	25	194	1		
		8797	−9	284	−10	19	339	6		
		8796	−9	284	+18	14	12	4		
		8804	−2	291	+9	2	12	1		
		8792	+13	306	+20	18	24	1		
		8792	+21	314	+21	25	145	22		
		8795	+40	333	+11	40	339	3		
		8795	+47	340	+10	47	242	6		
		8789	+77	10	−22	80	242	5		
		8791	+82	15	−20	83	339	2		
		(16)		(293)	(+7)		3,547	101		
2	10 31	8810	−80	200	−13	81	121	1	G	Do.
		8810	−76	204	−15	78	121	1		
		8810	−71	209	−13	73	194	3		
		8812	−76	204	+9	76	48	1		
		8811	−64	216	+16	64	12	3		
		8809	−63	217	−3	63	24	1		
		8809	−56	224	−2	56	73	6		
		8807	−47	233	+10	47	291	20		
		8806	−29	251	−15	36	194	1		
		8803	−21	259	−13	30	73	8		
		8803	−15	265	−11	24	194	19		
		8801	−10	270	+19	15	48	9		
		8801	−5	275	+17	12	61	11		
		8802	−8	272	−16	25	194	1		
		8799	−3	277	+14	7	145	1		
		8798	0	280	−16	23	61	1		
		8798	+6	286	−19	27	12	2		
		8798	+6	286	−16	26	194	6		
		8796	+3	283	+18	12	6	3		
		8797	+5	285	−10	18	339	6		
		8804	+11	291	+9	11	24	6		
		8792	+30	310	+20	32	73	18		
		8792	+40	320	+20	41	97	12		
		8800	+50	330	−21	57	12	2		
		8795	+54	334	+11	54	242	4		
		8795	+61	341	+10	61	291	7		
		(17)		(280)	(+7)		3,144	153		
3	10 15	8810	−66	201	−13	68	121	1	F	Do.
		8810	−63	204	−14	66	73	2		
		8810	−58	209	−13	61	194	3		
		8812	−63	204	+9	63	48	1		
		8809	−48	219	−3	48	24	3		
		8809	−42	225	−2	42	48	1		
		8807	−33	234	+10	33	291	19		
		8806	−15	252	−15	27	194	1		
		8806	−9	258	−13	22	12	1		
		8803	−3	264	−9	17	145	13		
		8803	+1	268	−10	17	61	1		
		8803	+7	274	−8	17	12	1		
		8802	+5	272	−16	25	194	1		
		8801	+9	276	+17	14	24	10		
		8799	+11	278	+14	13	170	1		
		8798	+14	281	−16	27	218	11		
		8798	+19	286	−18	32	24	5		
		8798	+24	291	−12	30	12	1		
		8797	+18	285	−9	25	242	9		
		8804	+25	292	+9	25	12	3		
		8792	+41	308	+21	42	24	2		
		8792	+53	320	+19	53	24	1		
		8795	+67	334	+11	67	291	7		
		8795	+75	342	+10	75	242	1		
		(14)		(267)	(+7)		2,700	99		

See footnotes at end of table.

766298—47——2

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1947	h m		°	°	°	°				
4	10 41	8810	−53	200	−14	56	73	1	G	U. S. Naval.
		8810	−48	205	−13	52	97	4		
		8810	−43	210	−12	46	97	3		
		8812	−49	204	+9	49	48	1		
		8811	−40	213	+15	40	97	7		
		8809	−28	225	−2	28	48	2		
		8807	−20	233	+11	20	533	26		
		8806	−3	250	−14	22	194	1		
		8803	+10	263	−10	20	73	8		
		8803	+15	268	−11	23	61	1		
		8814	+15	268	+21	21	12	3		
		8801	+18	271	+19	22	24	3		
		8802	+19	272	−16	30	194	1		
		8799	+25	278	+13	26	194	1		
		8799	+26	279	+17	28	12	4		
		8797	+30	283	−10	34	242	1		
		8797	+30	283	−12	35	24	5		
		8798	+30	283	−16	38	194	16		
		8813	+59	312	−29	66	12	3		
		8792	+66	319	+18	66	12	1		
		8795	+80	333	+10	80	291	3		
		(16)		(253)	(+7)		2,532	95		
5	11 21	8817	−88	152	+14	88	242	1	F	Do.
		8810	−39	201	−13	43	61	1		
		8810	−29	211	−13	35	194	12		
		8812	−35	205	+9	35	48	1		
		8811	−26	214	+15	26	194	8		
		8816	−15	225	−13	25	12	1		
		8809	−13	227	−2	15	24	2		
		8807	−6	234	+11	6	582	30		
		8806	+10	250	−17	27	6	1		
		8806	+11	251	−15	25	194	1		
		8814	+29	269	+22	32	24	5		
		8803	+29	269	−11	34	170	14		
		8802	+32	272	−16	39	145	1		
		8801	+33	273	+17	34	73	5		
		8799	+38	278	+12	38	170	1		
		8799	+40	280	+15	40	145	9		
		8797	+44	284	−9	47	194	1		
		8798	+44	284	−15	49	48	12		
		(15)		(240)	(+7)		2,536	106		
6	9 21	8817	−75	153	+14	75	242	1	VG	Mt. Wilson.
		8818	−62	166	−17	66	121	16		
		8812	−22	206	+9	22	24	1		
		8810	−22	206	−13	29	145	21		
		8811	−17	211	+15	19	97	6		
		8811	−12	216	+15	15	61	14		
		8816	−13	215	−12	23	121	14		
		8816	−2	226	−11	18	194	15		
		8809	+1	229	−2	9	24	2		
		8807	+5	233	+12	6	315	15		
		8807	+8	236	+12	10	48	9		
		8807	+9	237	+10	10	194	11		
		8806	+23	251	−13	30	12	3		
		8806	+25	253	−14	32	121	1		
		8814	+42	270	+22	44	109	16		
		8803	+44	272	−10	46	121	15		
		8802	+45	273	−16	51	145	1		
		8801	+45	273	+18	46	73	9		
		8799	+51	279	+12	51	145	1		
		8799	+52	280	+15	52	61	13		
		8797	+57	285	−9	60	145	1		
		8815	+57	285	−18	61	61	11		
		8798	+58	286	−15	62	145	10		
		(17)		(228)	(+7)		2,724	206		
7	15 54	8817	−61	150	+14	61	242	1	F	U. S. Naval.
		8818	−47	164	−17	52	145	5		
		8820	−22	189	+21	26	170	5		
		8819	−12	199	+18	16	97	3		
		8812	−8	203	+9	8	36	4		
		8810	−7	204	−13	22	73	10		
		8810	+1	212	−12	18	73	5		
		8811	0	211	+14	7	73	2		
		8811	+9	220	+14	12	48	3		
		8816	+12	223	−13	23	170	4		
		8809	+16	227	−2	19	24	2		
		8807	+23	234	+10	23	436	12		
		8806	+39	250	−15	44	145	1		
		8814	+55	266	+21	56	267	8		
		8801	+59	270	+18	59	73	4		
		8802	+60	271	−17	64	121	1		
		8803	+60	271	−12	63	97	1		
		8799	+68	279	+12	68	145	2		
		8798	+70	281	−15	73	97	4		
		8797	+71	282	−10	72	109	1		
		8815	+71	282	−20	75	24	1		
		(19)		(211)	(+7)		2,665	79		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic				Area of spot or group	Spot count	Plate quality	Observatory
			Difference in longitude	Longitude	Latitude	Distance from center of disk				
1947	h m		°	°	°	°				
8	11 24	8823	−88	112	+20	88	97	1	G	U. S. Naval.
		8822	−36	144	−20	61	24	3		
		8817	−48	152	+13	48	218	1		
		8818	−35	165	−17	42	267	27		
		8820	−13	187	+21	18	48	6		
		8820	−9	191	+20	16	97	1		
		8812	−3	197	+12	5	12	4		
		8812	+3	203	+8	3	24	10		
		8819	−1	199	+19	12	97	11		
		8810	+5	205	−13	21	121	15		
		8810	+13	213	−12	23	97	22		
		8811	+10	210	+14	13	12	3		
		8811	+20	220	+15	22	24	1		
		8816	+23	223	−12	29	218	4		
		8809	+29	229	−2	31	24	2		
		8807	+36	236	+11	36	194	17		
		8806	+50	250	−14	53	145	1		
		8814	+68	268	+22	68	339	6		
		8801	+71	271	+18	71	339	4		
		8802	+71	271	−17	75	194	1		
		8803	+72	272	−12	74	145	1		
		8799	+80	280	+12	80	145	1		
		8797	+84	284	−10	85	109	1		
		(19)		(200)	(+7)		2,990	143		
9	10 18	8823	−75	112	+20	76	73	1	G	Do.
		8822	−43	144	−20	50	61	9		
		8817	−36	151	+14	37	206	1		
		8818	−22	165	−17	33	291	28		
		8821	−7	180	−20	28	6	1		
		8820	0	187	+22	15	48	7		
		8820	+3	190	+20	13	121	12		
		8812	+10	197	+10	11	12	4		
		8812	+20	207	+10	20	24	7		
		8819	+13	200	+18	17	24	9		
		8819	+17	204	+19	22	97	8		
		8810	+17	204	−15	27	24	8		
		8810	+27	214	−13	34	121	8		
		8811	+31	218	+17	33	24	10		
		8816	+37	224	−13	42	194	4		
		8807	+49	236	+9	49	291	17		
		8824	+57	244	−3	59	12	4		
		8806	+63	250	−14	67	145	1		
		8814	+82	269	+22	83	388	5		
		8801	+85	272	+18	86	242	5		
		(16)		(187)	(+7)		2,404	149		
10	11 4	8823	−61	113	+20	61	73	2	VG	Do.
		8822	−31	143	−19	40	145	18		
		8822	−25	149	−20	36	121	6		
		8817	−23	151	+14	25	145	8		
		8818	−11	163	−17	27	242	17		
		8818	−6	168	−17	25	170	8		
		8826	−8	166	−20	28	48	11		
		8821	+6	180	−21	29	12	8		
		8820	+13	187	+21	19	24	12		
		8820	+17	191	+19	22	145	16		
		8819	+25	199	+17	26	6	1		
		8819	+31	205	+19	33	73	10		
		8810	+30	204	−15	36	24	10		
		8810	+39	213	−14	44	61	10		
		(*)	+40	214	+9	40	24	10		
		(*)	+43	217	+15	43	24	12		
		8816	+45	219	−14	50	73	4		
		8816	+50	224	−14	54	194	4		
		8811	+46	220	+13	46	12	1		
		8807	+62	236	+9	62	97	6		
		8824	+71	245	−4	72	97	4		
		8806	+78	252	−14	80	145	1		
		(16)		(174)	(+7)		1,955	179		
11	10 38	8823	−47	114	+19	48	61	1	VG	Do.
		8822	−23	138	−19	34	6	4		
		8822	−20	141	−19	33	73	2		
		8822	−13	148	−20	30	145	7		
		8817	−13	148	+13	14	12	6		
		8817	−9	152	+13	12	145	2		
		8818	+5	166	−17	26	485	27		
		8826	+7	168	−19	27	73	7		
		8820	+24	185	+21	27	48	3		
		8820	+31	192	+19	33	194	5		
		8819	+41	202	+18	42	12	4		
		8819	+47	208	+18	47	61	3		
		8825	+47	208	+22	48	48	9		
		8812	+48	209	+12	48	12	2		
		8810	+52	213	−14	56	24	5		
		8811	+59	220	+14	59	24	3		
		8816	+63	224	−14	66	145	5		
		8807	+72	233	+8	72	24	1		
		8807	+81	242	+9	81	48	1		
		(13)		(161)	(+7)		1,640	97		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic				Area of spot or group	Spot count	Plate quality	Observatory
			Difference in longitude	Longitude	Latitude	Distance from center of disk				
1947	h m		°	°	°	°				
12	10 11	8829	−83	65	+10	83	218	1	G	U. S. Naval.
		8828	−70	78	−10	72	6	1		
		8827	−61	87	+16	61	24	4		
		8823	−33	115	+19	34	48	1		
		8822	−6	142	−20	28	48	5		
		8822	+1	149	−20	27	121	3		
		8817	+3	151	+13	6	145	2		
		8818	+19	167	−16	30	339	21		
		8826	+20	168	−18	32	73	12		
		8820	+39	187	+22	40	48	9		
		8820	+44	192	+19	45	206	1		
		8825	+59	207	+22	59	73	8		
		8819	+60	208	+17	60	48	1		
		8810	+68	216	−12	70	24	2		
		8811	+70	218	+15	70	24	4		
		8816	+78	226	−12	80	145	2		
		(14)		(148)	(+7)		1,590	77		
13	11 29	8829	−80	54	+13	80	242	4	G	Do.
		8829	−68	66	+10	68	194	1		
		8828	−56	78	−10	58	24	1		
		8827	−47	87	+17	48	97	7		
		8823	−20	114	+19	23	36	1		
		8822	+7	141	−19	27	12	3		
		8822	+16	150	−19	31	145	3		
		8817	+17	151	+14	20	170	2		
		8818	+28	162	−15	36	48	8		
		8818	+36	170	−16	44	97	7		
		8826	+30	164	−20	40	73	7		
		8826	+36	170	−19	44	242	8		
		8820	+51	185	+22	52	12	3		
		8820	+60	194	+18	60	218	3		
		8825	+70	204	+22	70	242	6		
		8819	+73	207	+18	73	48	2		
		8810	+82	216	−12	83	24	2		
		(12)		(134)	(+7)		1,924	68		
14	11 12	8830	−85	36	+12	85	145	1	F	Do.
		8829	−66	55	+12	66	242	3		
		8829	−58	63	+12	58	12	2		
		8829	−55	66	+10	55	194	1		
		8828	−44	77	−11	46	48	6		
		8827	−33	88	+14	34	291	8		
		8823	−6	115	+19	20	12	1		
		8822	+30	151	−19	40	145	1		
		8817	+30	151	+13	31	158	2		
		8818	+40	161	−15	46	24	4		
		8818	+50	171	−17	56	121	2		
		8826	+46	167	−22	53	48	2		
		8826	+51	172	−22	57	145	1		
		8820	+73	194	+19	73	194	1		
		8825	+84	205	+22	84	242	5		
		(11)		(121)	(+7)		2,021	40		
15	12 12	8830	−80	27	+12	80	145	2	F	Do.
		8830	−71	36	+12	71	121	2		
		8829	−52	55	+13	52	158	6		
		8829	−50	57	+10	50	12	1		
		8829	−41	66	+10	41	194	1		
		8828	−30	77	−10	35	48	3		
		8827	−20	87	+13	22	61	8		
		8827	−17	90	+13	19	218	1		
		8823	+6	113	+19	14	12	1		
		8822	+42	149	−19	48	145	1		
		8817	+44	151	+13	44	194	1		
		8826	+59	166	−23	65	97	6		
		8826	+63	170	−22	66	242	5		
		8818	+63	170	−17	67	109	4		
		8820	+85	192	+19	85	194	1		
		(10)		(107)	(+7)		1,950	43		
16	12 13	8832	−85	9	−20	86	242	1	F	Do.
		8830	−65	29	+12	65	170	3		
		8830	−59	35	+12	59	73	2		
		(*)	−65	29	−15	68	12	1		
		8829	−39	55	+13	39	97	6		
		8829	−28	66	+10	28	194	1		
		8828	−18	76	−11	26	121	6		
		8828	−11	83	−12	22	73	3		
		8827	−7	87	+13	11	170	17		
		8827	−3	91	+13	6	194	1		
		8831	+3	97	−21	28	12	3		
		8822	+56	150	−19	61	194	1		
		8817	+57	151	+12	57	145	2		
		8826	+71	165	−22	73	121	1		
		8826	+78	172	−21	79	242	1		
		8818	+76	170	−17	77	97	2		
		(11)		(94)	(+7)		2,157	51		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic				Area of spot or group	Spot count	Plate quality	Observatory
			Difference in longitude	Longitude	Latitude	Distance from center of disk				
1947	h m		°	°	°	°				
17	10 21	8832	−75	7	−21	78	315	2	G	U. S. Naval.
		8830	−57	25	+15	57	6	2		
		8830	−46	36	+12	46	73	6		
		8830	−51	31	+11	51	109	2		
		8829	−26	56	+12	27	73	10		
		8829	−16	66	+11	17	12	6		
		8829	−15	67	+10	16	194	1		
		8828	−12	70	−11	22	24	5		
		8828	−3	79	−11	18	73	12		
		8828	+3	85	−13	20	48	6		
		8827	+6	88	+13	8	121	15		
		8827	+11	93	+13	13	242	4		
		8817	+69	151	+12	69	121	1		
		8822	+70	152	−20	73	145	1		
		(7)		(82)	(+7)		1,556	73		
18	10 12	8832	−61	8	−21	66	242	3	G	Do.
		8830	−39	30	+11	39	97	10		
		8830	−33	36	+12	33	73	12		
		8829	−13	56	+12	14	109	27		
		8829	−2	67	+10	3	194	1		
		8829	−3	66	+11	5	12	4		
		8828	+3	72	−11	18	73	15		
		8828	+18	87	−15	29	24	3		
		8827	+18	87	+13	19	97	15		
		8827	+25	94	+13	26	194	3		
		8817	+81	150	+12	81	121	1		
		(6)		(69)	(+7)		1,236	94		
19	10 36	8832	−46	9	−21	53	218	1	G	Do.
		8830	−25	30	+11	25	61	3		
		8830	−18	37	+12	19	48	1		
		8830	−18	37	+14	20	36	4		
		8829	+1	56	+12	5	145	13		
		8829	+11	66	+9	12	194	1		
		8829	+11	66	+12	13	12	1		
		8827	+32	87	+14	33	48	14		
		8827	+36	91	+13	36	73	19		
		8827	+39	94	+13	39	194	1		
		8828	+33	88	−15	39	6	1		
		(5)		(55)	(+7)		1,035	59		
20	12 43	8834	−80	321	−17	82	24	3	VG	Mt. Wilson.
		8834	−75	326	−20	77	218	1		
		8833	−67	334	+17	67	24	6		
		8832	−32	9	−20	42	218	2		
		8830	−9	32	+12	11	24	5		
		8830	−3	38	+12	6	12	2		
		8829	+17	58	+13	19	194	22		
		8829	+20	61	+12	21	97	1		
		8829	+27	68	+11	28	218	10		
		8828	+50	91	−13	54	6	1		
		8827	+56	97	+17	56	315	29		
		(7)		(41)	(+7)		1,350	82		
22	14 2	8834	−55	319	−18	61	24	4	F	U. S. Naval.
		8834	−48	326	−20	55	194	1		
		8833	−39	355	+18	40	242	15		
		8835	−27	347	+7	27	12	1		
		8832	−6	8	−21	29	194	2		
		8830	+16	30	+10	17	12	1		
		8829	+43	57	+12	43	145	6		
		8829	+53	67	+10	53	291	8		
		8827	+83	97	+13	83	194	1		
		(7)		(14)	(+7)		1,308	39		
23	10 28	8841	−77	286	+16	77	145	3	VG	Mt. Wilson.
		8840	−74	289	−17	76	48	4		
		8834	−43	320	−19	50	12	6		
		8834	−36	327	−19	45	194	1		
		8833	−27	336	+19	29	339	29		
		8833	−22	341	+17	24	558	1		
		8838	−19	344	−27	39	6	1		
		8837	−12	351	−19	29	6	1		
		8832	+8	11	−21	29	218	2		
		8836	+19	22	+16	22	12	2		
		8830	+30	33	+11	30	24	12		
		8829	+53	56	+13	53	12	4		
		8829	+60	63	+12	60	61	2		
		8829	+66	69	+11	66	388	12		
		(10)		(3)	(+7)		2,023	80		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic				Area of spot or group	Spot count	Plate quality	Observatory
			Difference in longitude	Longitude	Latitude	Distance from center of disk				
1947	h m		°	°	°	°				
24	9 37	8843	−68	282	+19	68	24	2	VG	Mt. Wilson.
		8841	−67	283	+16	67	73	4		
		8841	−63	287	+15	63	97	1		
		8840	−62	288	−17	66	48	3		
		8839	−59	291	−12	62	121	17		
		8834	−27	323	−18	37	48	4		
		8834	−22	328	−19	34	194	1		
		8833	−18	332	+18	21	364	10		
		8833	−10	340	+18	15	145	19		
		8833	−7	343	+17	13	339	1		
		8842	−10	340	−14	24	12	5		
		8838	−6	344	−26	35	6	3		
		8837	+2	352	−20	27	24	11		
		8832	+21	11	−21	35	206	1		
		8829	+65	55	+14	65	12	2		
		8829	+74	64	+12	74	224	4		
		8829	+80	70	+10	80	145	3		
		(11)		(350)	(+7)		2,082	91		
25	13 14	8848	−62	273	−29	69	61	1	G	U. S. Naval.
		8847	−58	277	−12	61	6	1		
		8843	−57	278	+17	57	73	9		
		8841	−53	282	+16	53	48	6		
		8841	−49	286	+15	49	97	1		
		8840	−51	284	−18	56	24	3		
		8839	−44	291	−12	48	97	4		
		8839	−39	296	−9	42	97	2		
		8846	−33	302	+17	34	12	2		
		8845	−23	312	−8	27	6	2		
		8834	−13	322	−19	29	12	2		
		8834	−8	327	−20	28	194	1		
		8833	−3	332	+18	12	242	8		
		8833	+2	337	+18	12	145	10		
		8833	+7	342	+17	13	24	11		
		8833	+11	346	+17	15	485	1		
		8842	+3	338	−14	21	6	3		
		8837	+15	350	−21	32	73	6		
		8832	+34	9	−21	43	194	1		
		(13)		(335)	(+7)		1,896	74	-----	
26	11 0	8852	−85	238	−10	85	194	1	F	Do.
		8852	−78	245	−9	79	218	1		
		8851	−74	249	−14	76	12	1		
		8848	−49	274	−29	59	61	1		
		8843	−47	276	+19	48	97	5		
		8843	−43	280	+18	44	97	4		
		8847	−45	278	−12	48	24	5		
		8841	−40	283	+13	40	24	2		
		8841	−35	288	+16	36	61	1		
		8839	−32	291	−12	36	48	1		
		8839	−27	296	−10	32	73	5		
		8840	−32	291	−16	39	12	4		
		8846	−21	302	+18	24	97	6		
		8834	+1	324	−18	25	12	2		
		8834	+4	327	−20	27	194	1		
		8849	+6	329	−15	23	12	4		
		8833	+11	334	+19	16	436	5		
		8833	+16	339	+18	20	24	4		
		8833	+22	345	+17	24	630	1		
		8842	+16	339	−14	26	24	5		
		8837	+27	350	−21	38	24	2		
		8832	+47	10	−21	53	194	1		
		(15)		(323)	(+7)		2,568	62		
27	11 13	8852	−69	240	−10	70	194	1	F	Do.
		8852	−63	246	−8	65	291	1		
		8848	−37	272	−29	51	73	4		
		8847	−32	277	−12	37	12	3		
		8843	−33	276	+20	35	24	1		
		8843	−30	279	+18	32	315	15		
		8841	−22	287	+15	24	97	1		
		8853	−19	290	+18	22	24	2		
		8840	−17	292	−16	29	12	5		
		8839	−15	294	−10	23	133	10		
		8846	−8	301	+18	14	48	5		
		8844	+11	320	+24	20	12	2		
		8834	+17	326	−19	31	194	1		
		8833	+24	333	+18	26	485	5		
		8833	+36	345	+17	37	606	1		
		8842	+29	338	−14	36	24	2		
		8837	+40	349	−21	48	24	2		
		8832	+60	9	−22	65	194	1		
		(15)		(309)	(+7)		2,762	62		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1947	*h m*		°	°	°	°				
28	11 2	8855	−75	221	−13	77	242	4	F	U. S. Naval
		8852	−56	240	−10	58	218	1		
		8852	−50	246	−9	52	242	2		
		8848	−23	273	−31	44	48	1		
		8854	−22	274	+9	22	36	5		
		8843	−20	276	+19	23	73	5		
		8843	−17	279	+18	21	194	9		
		8841	−9	287	+13	11	61	1		
		8846	−4	292	+16	11	12	2		
		8840	−4	292	−16	24	12	2		
		8839	−1	295	−12	18	242	11		
		8834	+30	326	−20	41	109	2		
		8833	+36	332	+17	38	388	3		
		8833	+49	345	+17	49	582	1		
		8842	+42	338	−15	47	12	1		
		8832	+72	8	−22	73	97	1		
		(13)		(296)	(+7)		2,568	51		
29	13 47	8855	−71	211	−17	74	145	2	F	Do.
		8855	−61	221	−13	64	242	5		
		8852	−42	240	−10	44	206	1		
		8852	−38	244	−9	42	242	1		
		8851	−29	253	−15	36	12	3		
		8848	−10	272	−31	39	24	3		
		8854	−7	275	+9	8	73	4		
		8843	−5	277	+18	13	194	13		
		8847	0	282	−10	17	6	2		
		8841	+5	287	+13	6	61	1		
		8840	+6	288	−19	26	12	2		
		8839	+12	294	−13	23	242	16		
		8846	+17	299	+17	21	97	6		
		8834	+43	325	−20	50	97	2		
		8833	+49	331	+17	49	339	5		
		8833	+61	343	+17	61	582	1		
		(13)		(282)	(+7)		2,574	67		
30	10 50	8859	−81	189	+20	81	242	6	G	Do.
		8858	−59	211	+25	59	48	1		
		8858	−57	213	+25	57	48	8		
		8855	−58	212	−16	62	145	2		
		8855	−50	220	−12	53	97	9		
		8855	−47	223	−13	51	242	4		
		8852	−28	242	−10	33	242	7		
		8852	−24	246	−9	29	218	1		
		8851	−17	253	−16	28	145	9		
		8857	−7	263	−2	12	12	3		
		8848	+2	272	−32	39	6	1		
		8854	+7	277	+9	8	24	3		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR SEPTEMBER 1947—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1947	*h m*		°	°	°	°				
30	10 50	8843	+9	279	+19	16	121	10		U. S. Naval
		8841	+19	289	+15	21	73	4		
		8856	+24	294	+9	24	24	6		
		8839	+27	297	−13	34	97	15		
		8846	+29	299	+17	31	121	8		
		8846	+31	301	+18	33	206	1		
		8834	+56	326	−20	62	61	1		
		8833	+63	333	+16	63	291	4		
		8833	+75	345	+16	75	582	1		
		(15)		(270)	(+7)		3,045	104		

Mean daily area for 29 days=2,223
Mean 10 g+s for 29 days=219.1

(*) Not numbered.
VG=very good; G=good; F=fair; P=poor.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR SEPTEMBER 1947

[Dependent on observations at Zurich Observatory and its stations at Locarno and Arosa]

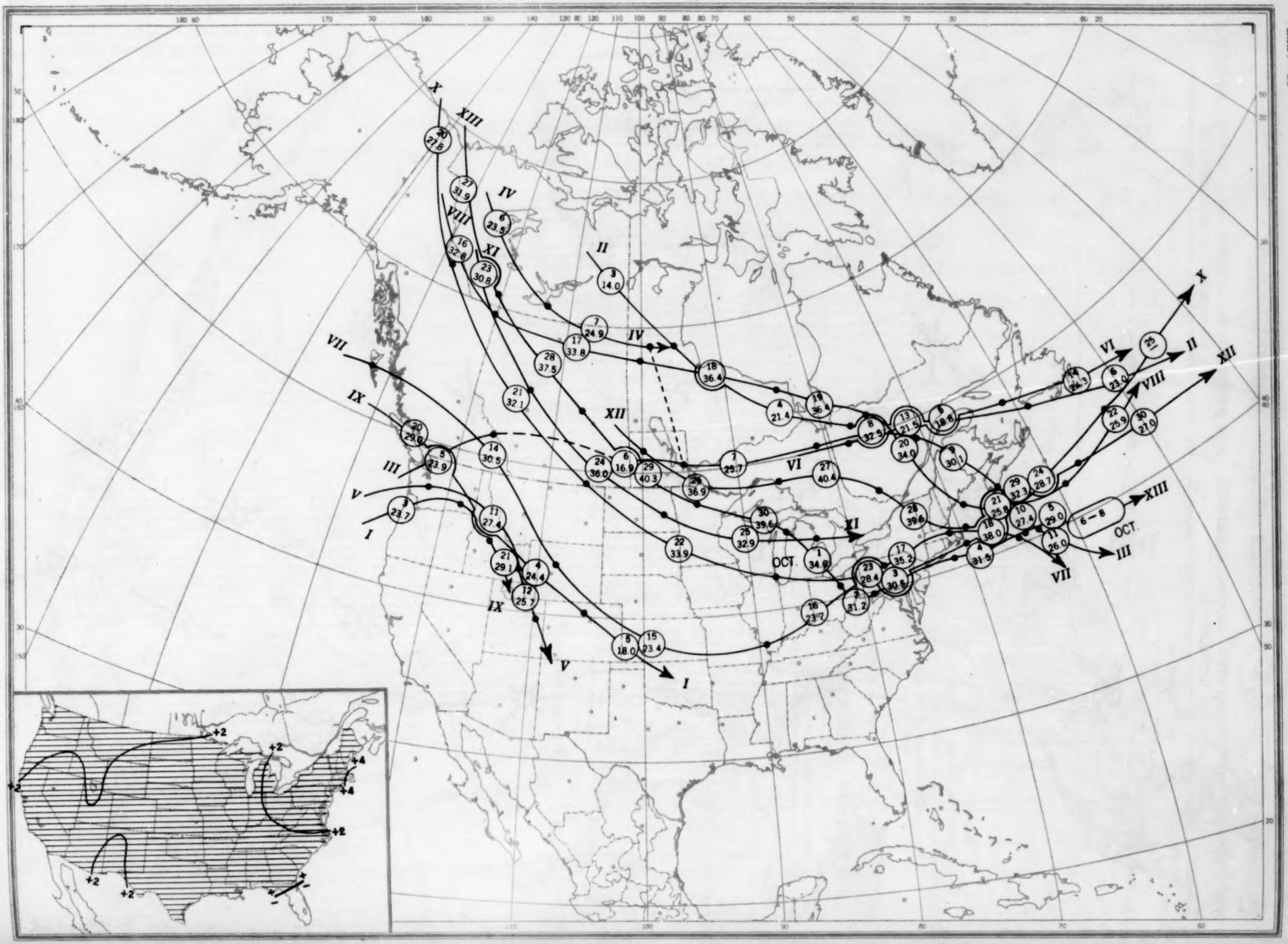
September 1947	Relative numbers	September 1947	Relative numbers	September 1947	Relative numbers
1	237	11	191	21	98
2	196	12	194	22	98
3	236	13	156	23	106
4	181	14	150	24	128
5	204	15	137	25	150
6	206	16	122	26	173
7	243	17	156	27	197
8	284	18	140	28	194
9	242	19	105	29	213
10	206	20	93	30	229

Mean, 30 days=175.5

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, September 1947

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, September 1947

Chart II. Tracks of Centers of Anticyclones, September 1947. (Inset) August Departure of Monthly Mean Pressure from Normal

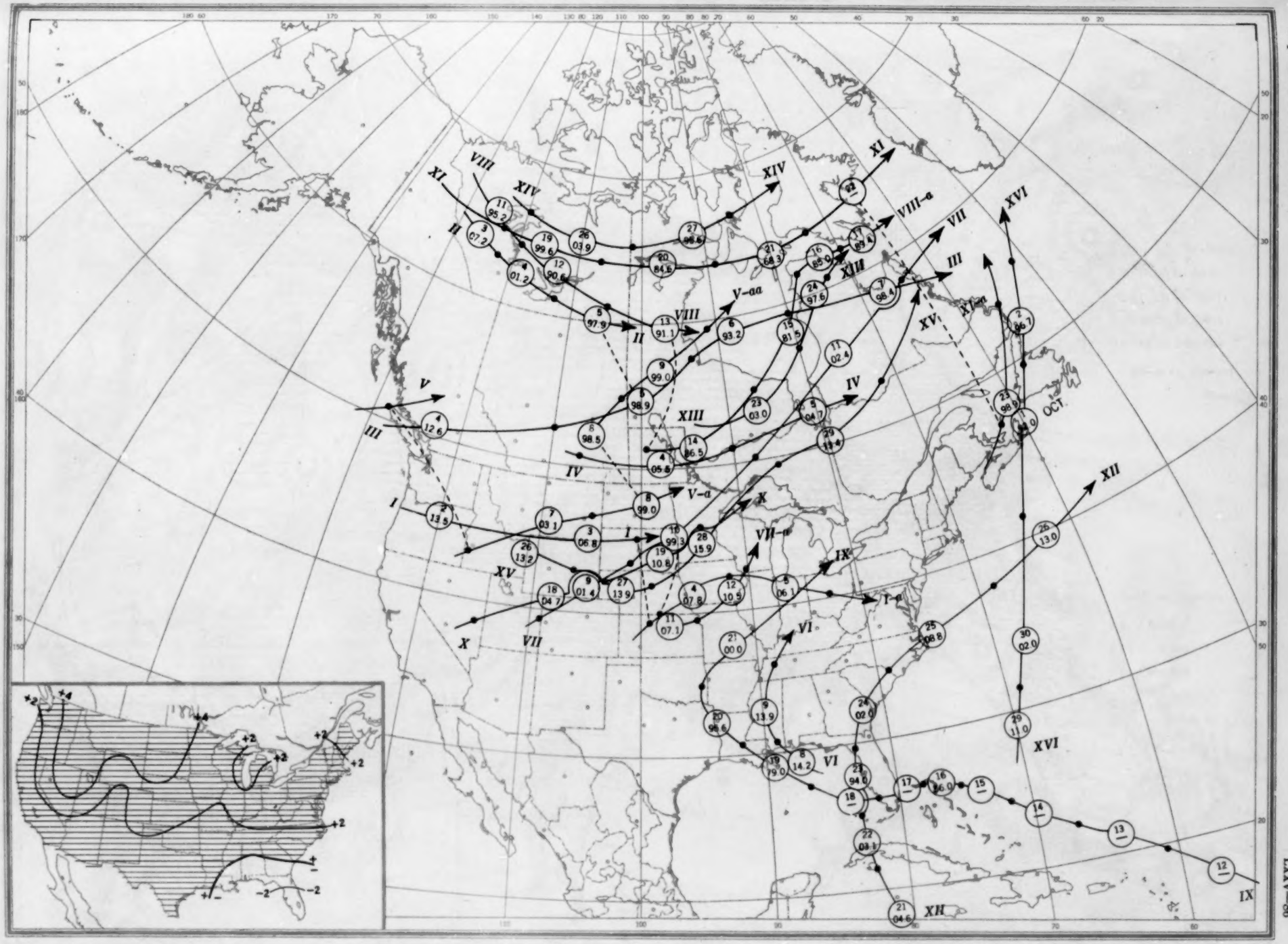


Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, September 1947. (Inset) Change in Mean Pressure from Preceding Month

Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, September 1947. (Inset) Change in Mean Pressure from Preceding Month



Circle indicates position of cyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of cyclone at 7:30 p. m. (75th meridian time)

Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, September 1947

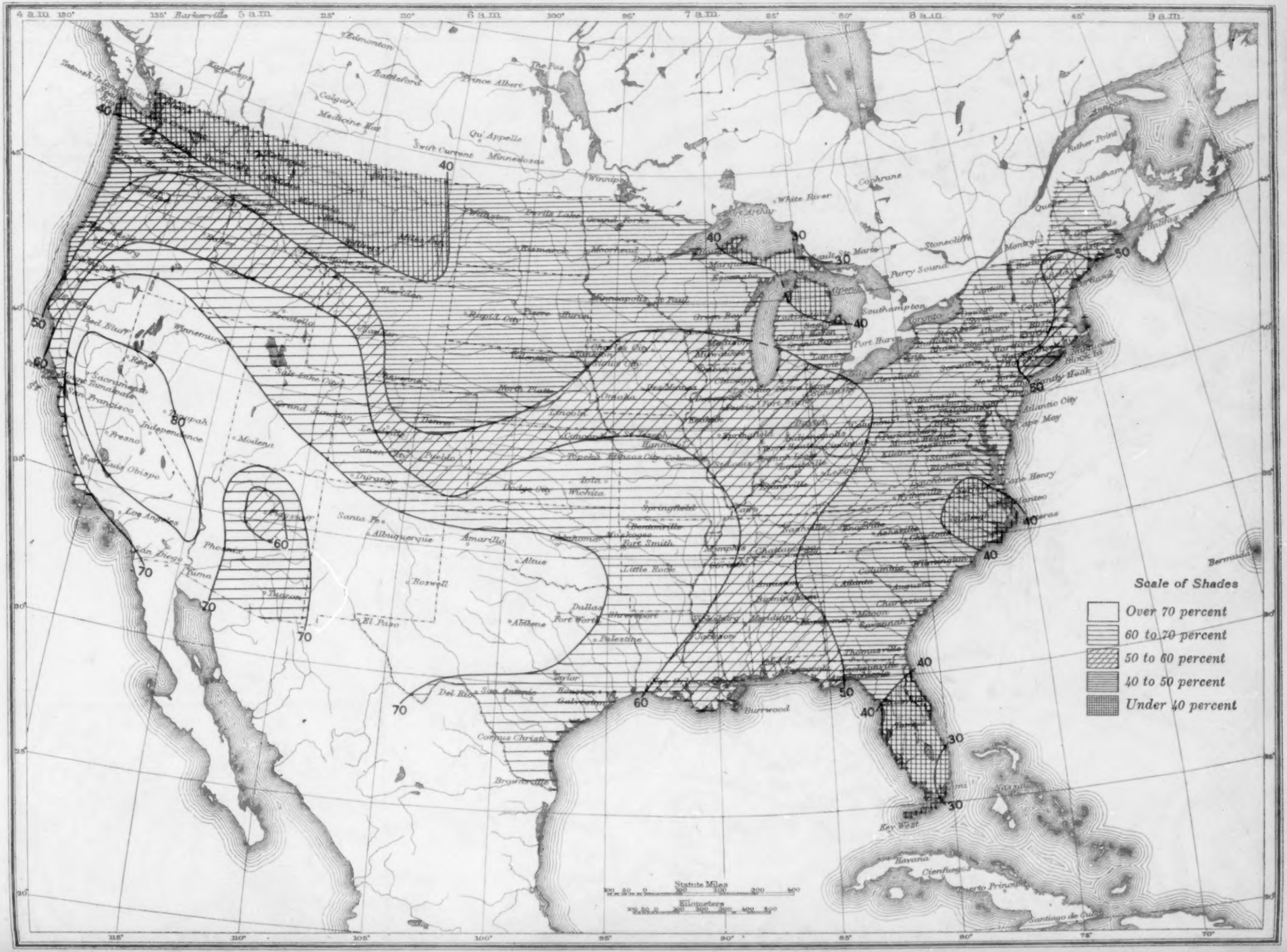


Chart V. Total Precipitation, Inches, September 1947. (Inset) Departure of Precipitation from Normal

Chart V. Total Precipitation, Inches, September 1947. (Inset) Departure of Precipitation from Normal

Chart VI. Isobars (mb.), at Sea Level and Isotherms (°F.) at Surface; Prevailing Winds, September 1947

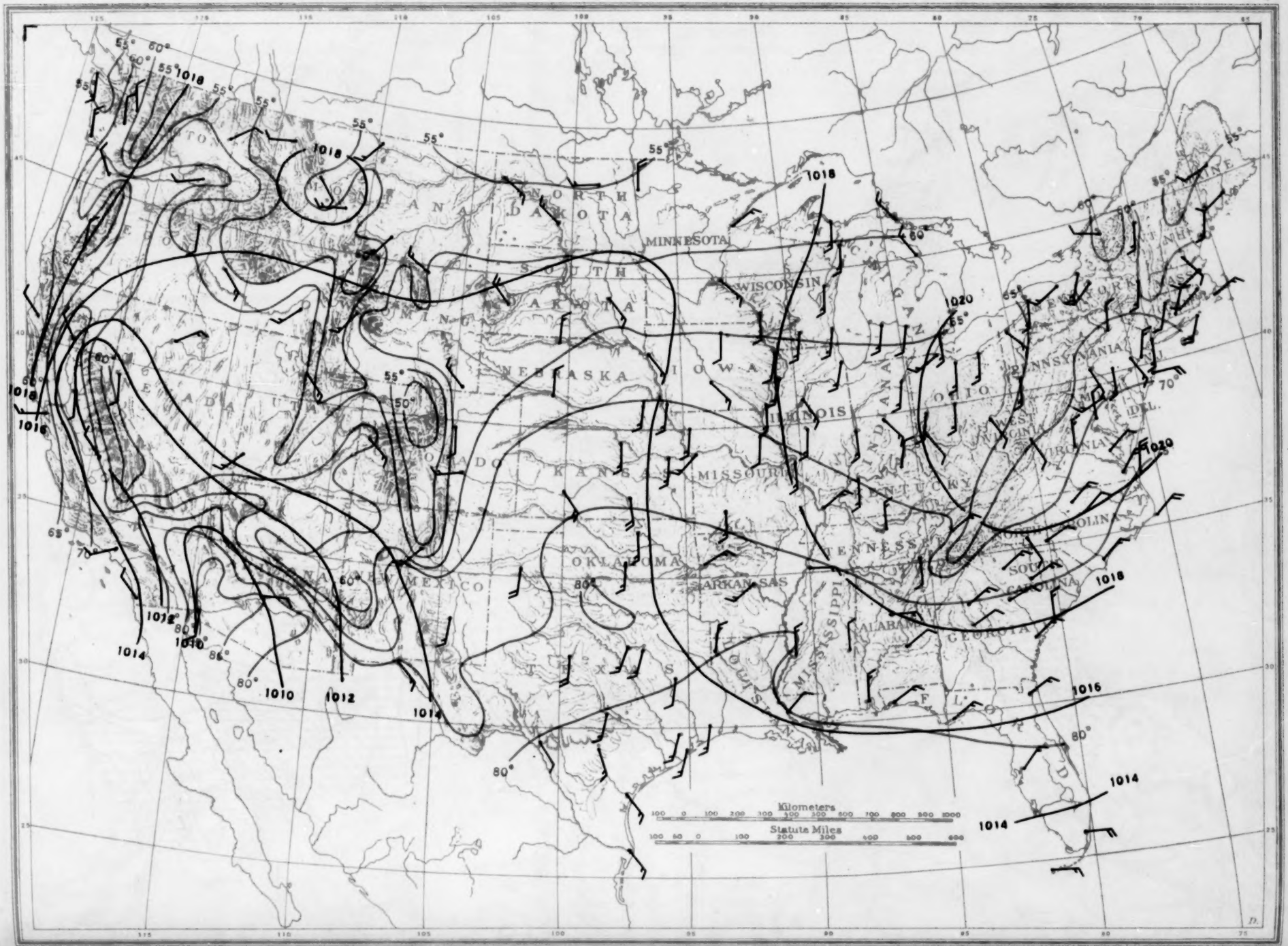
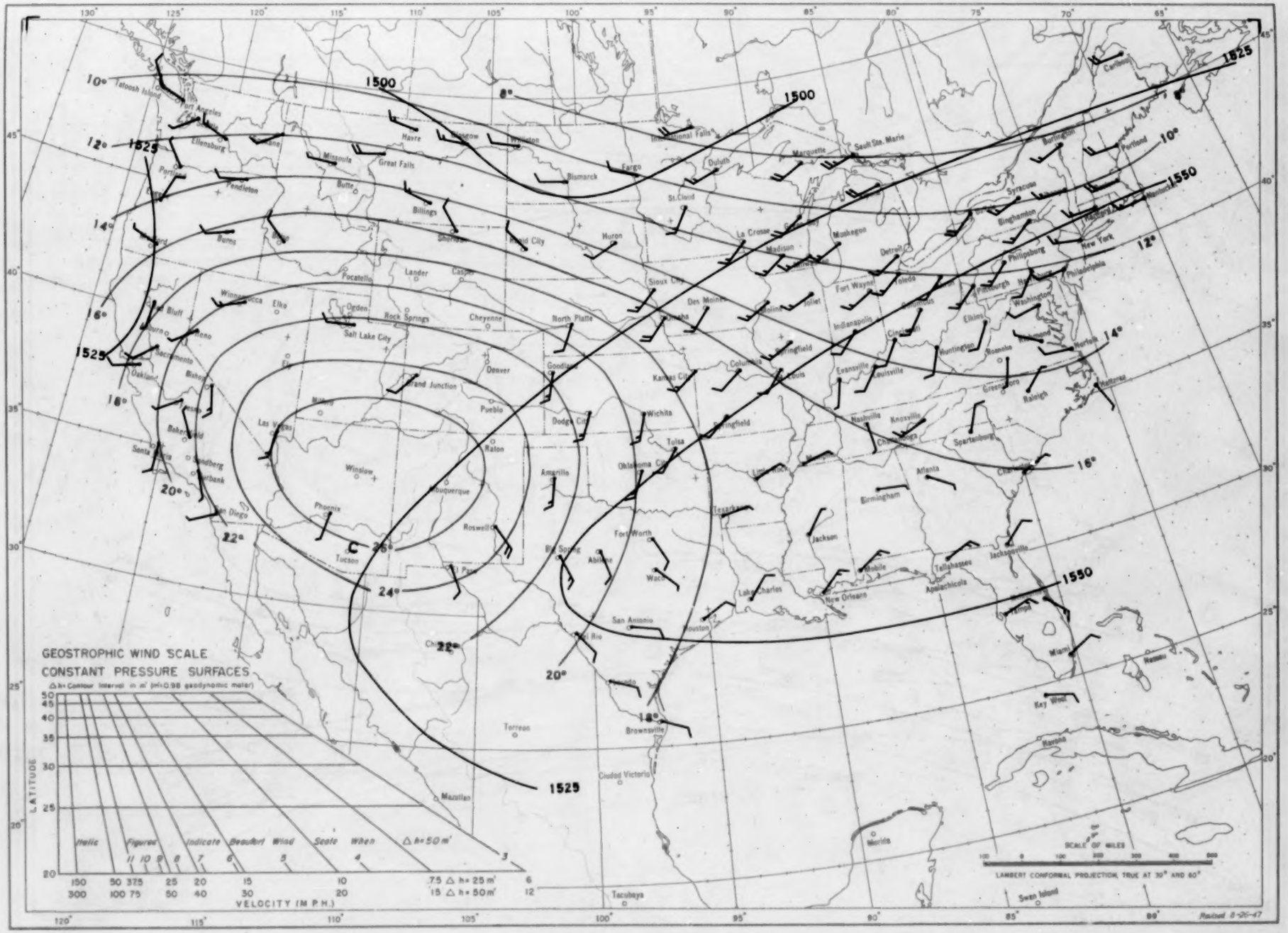
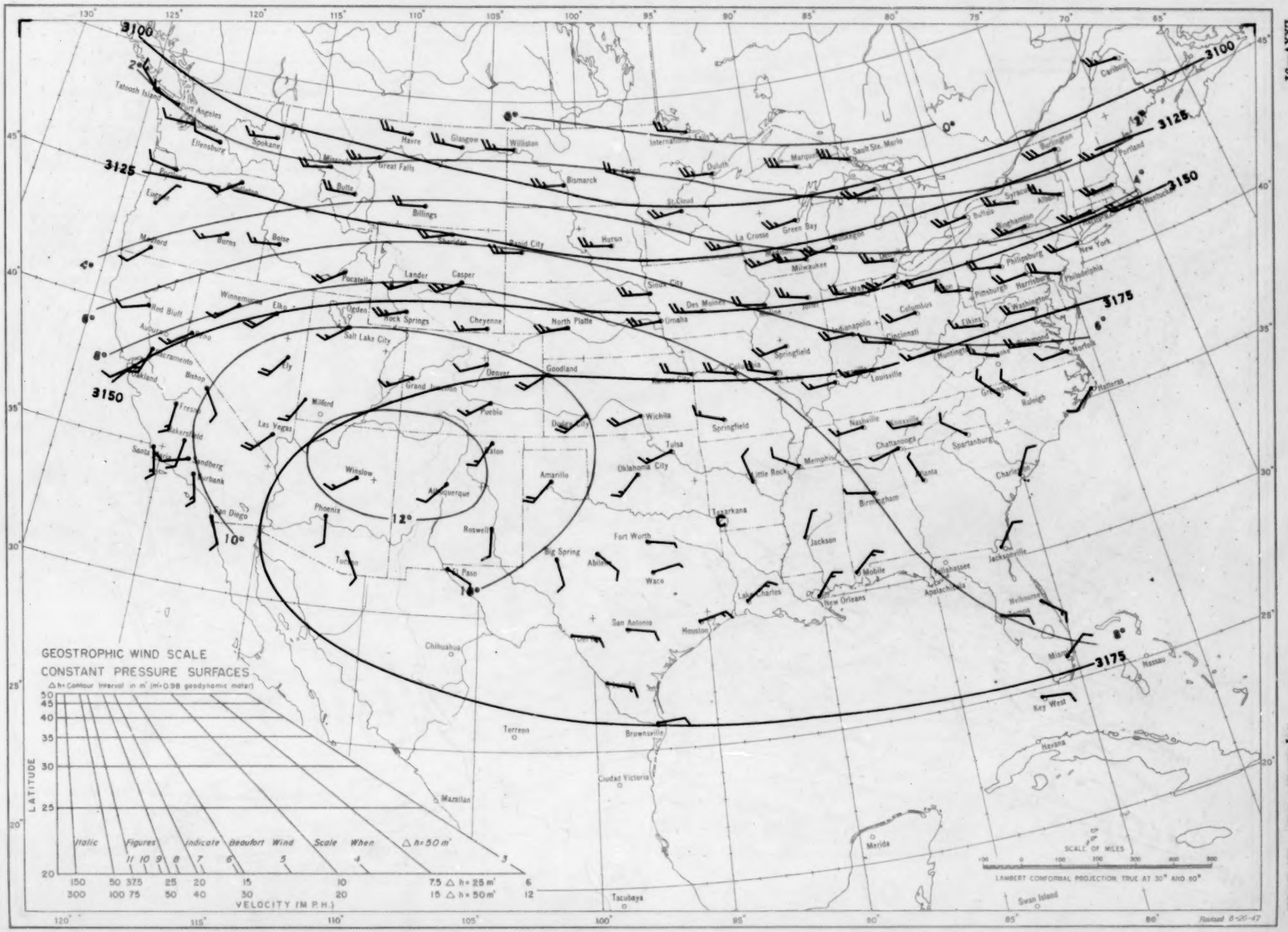


Chart VIII, September 1947. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meters and Isotherms in Degrees Centigrade for the 850–millibar Pressure Surface, and Resultant Winds at 1,500 Meters (m.s.l.)



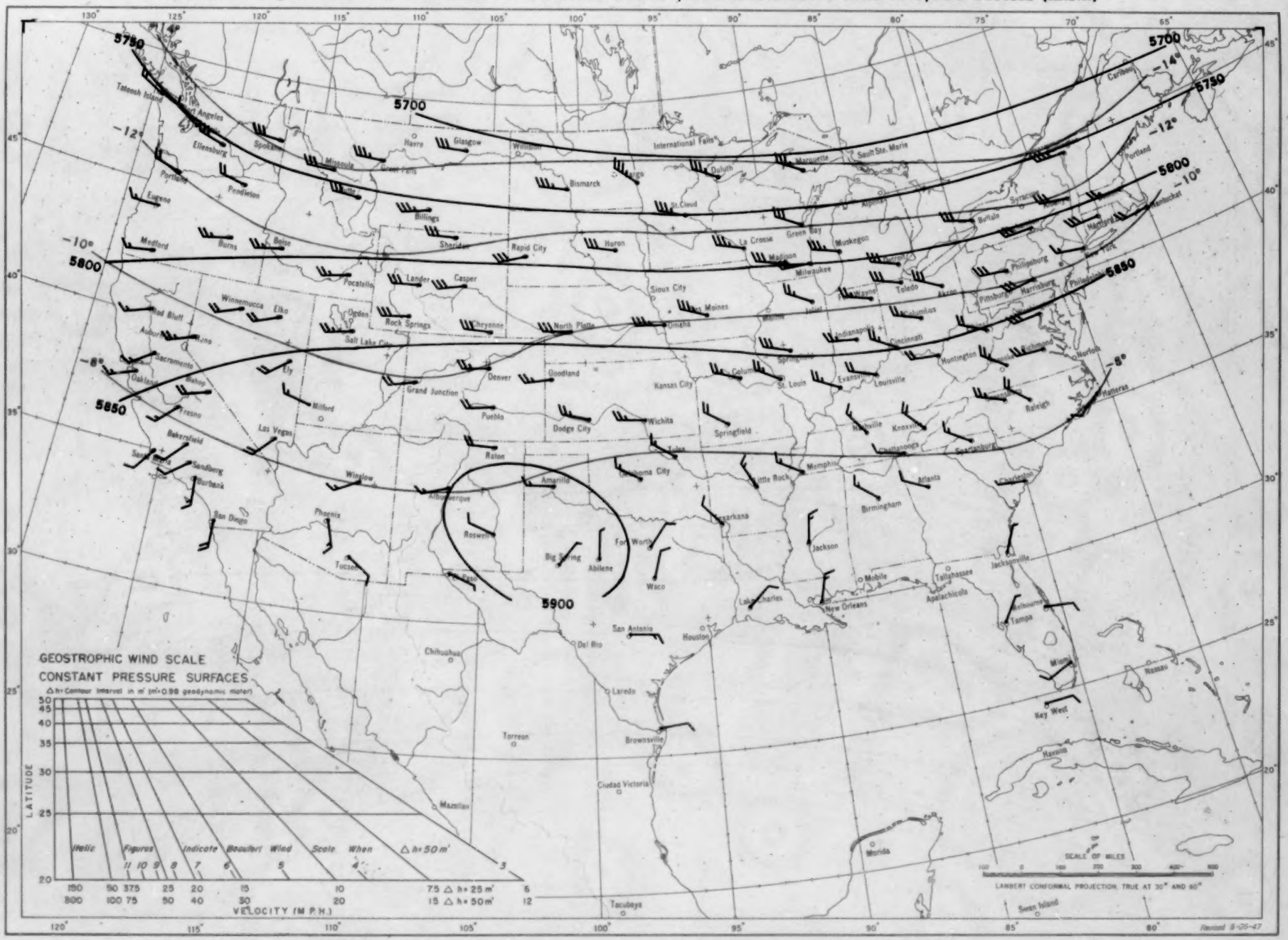
Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.

Chart IX, September 1947. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meters and Isotherms in Degrees Centigrade for the 700–millibar Pressure Surface, and Resultant Winds at 3,000 Meters (m.s.l.)



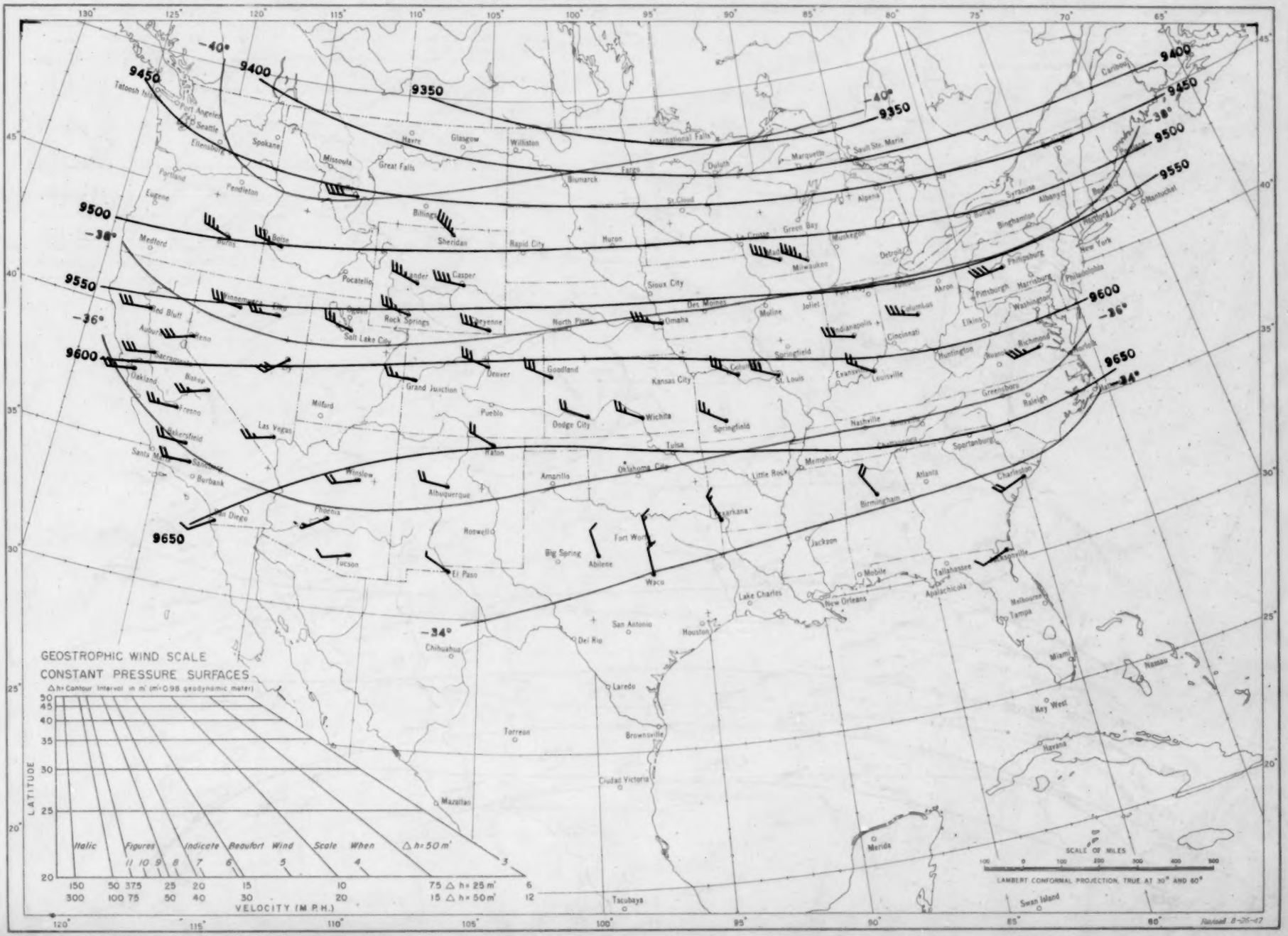
Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.

Chart X, September 1947. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meters and Isotherms in Degrees Centigrade for the 500-millibar Pressure Surface, and Resultant Winds at 5,000 Meters (m.s.l.)



Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.

Chart XI, September 1947. Contour Lines of Dynamic Height (Geopotential) in Units of 0.98 Dynamic Meters and Isotherms in Degrees Centigrade for the 300–millibar Pressure Surface, and Resultant Winds at 10,000 Meters (m.s.l.)



Contour lines and isotherms based on radiosonde observations at 0300 G.C.T., and winds based on pilot balloon observations at 2200 G.C.T.